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PART FIRST

ORIGINAL COMMUNICATIONS.

Notes on some of the chemical reactions of Narcotine and Meconic Acid. By T. G. WORMLEY, M.D.

In the present article it is proposed to give some of the chemical reactions by which two of the *proximate principles* of opium may be recognized. The method of applying the tests is the same as that given in previous articles in regard to various alkaloids.

NARCOTINE.

Pure crystallized narcotine was dissolved in water, just sufficiently acidulated with hydrochloric acid to effect solution, and the reagents were applied to a grain of this solution.

1. POTASH.

1. $\frac{1}{100}$th, grain of narcotine in one grain of water, when acted upon by a small drop of potash solution, gives an immediate copious white amorphous precipitate, which is insoluble in excess of potash, but dissolves readily in a few drops of strong acetic acid.

2. $\frac{1}{1000}$th, gives an immediate white amorphous precipitate which after some little time is changed into beautiful groups of branched crystals which are very characteristic.

3. $\frac{1}{5000}$th, an immediate precipitate, which very soon is crystalline. If there be much excess of the reagent, the precipitate will not be produced.

4. $\frac{1}{10000}$th, an immediate cloudiness, which almost immediately becomes crystalline, and after a little time there is a rather abundant deposit of aciculated and branched crystals.

5. $\frac{1}{20000}$th, a perceptible cloudiness, soon much the same as in 4.

6. $\frac{1}{40000}$th, only a faint cloudiness at first, but very soon there is a deposit of aciculated crystals, which when examined by a microscope are rather abundant. In applying the reagent to solutions as dilute as this and the one preceding, it is necessary to use the least possible quantity, otherwise there will be no deposit.

2. Ammonia.

1. $\frac{1}{100}$th, grain of narcotine gives with ammonia an immediate white curdy precipitate, not readily soluble in excess of reagent, but readily, in a few drops of strong acetic acid. After a little time the precipitate becomes crystalline, the crystals having the same form as those produced by potash.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{5000}$th, an immediate cloudiness, which very soon becomes crystalline; to obtain the ppt. the least possible quantity of reagent must be used. By suspending, for a few moments, a drop of ammonia over the narcotine solution, the latter is covered by a white cloudiness, which very soon becomes crystalline.

4. $\frac{1}{10000}$th, by applying the vapor of ammonia, no cloudiness is produced, but soon there is a very good deposit of crystals.

5. $\frac{1}{30000}$th, by using a small quantity of the ammoniacal vapor, there is soon produced a pretty fair deposit.

The carbonates of potash and ammonia, behave in the same manner as the alkalies. Several specimens of iodide of potassium gave, also, the same reactions, and the same crystalline form.

3. Chromate of Potash.

1. $\frac{1}{100}$th, gives an immediate copious yellow amorphous precipitate, which is readily soluble in acetic acid.

2. $\frac{1}{1000}$th, a yellow precipitate, soon crystals, same as produced by potash.

3. $\frac{1}{5000}$th, much the same as 2. Much increased by stirring.

4. $\frac{1}{10000}$th, no immediate precipitate, but very soon a good crystalline deposit, especially by stirring.

5. $\frac{1}{20000}$th, in a few minutes a quite perceptible crystalline precipitate.

4. Bichromate of Potash.

1. $\frac{1}{1000}$th, gives an immediate copious yellow amorphous precipitate, which after some time becomes granular. The precipitate is soluble in excess of acetic acid.

2. $\frac{1}{3000}$th, a light yellow precipitate, very soon granular.

3. $\frac{1}{10000}$th, no indication after some time.

5. Sulphocyanide of Potassium.

1. $\frac{1}{1000}$th, gives a white amorphous precipitate, soluble in acetic acid; the precipitate does not become crystalline by standing.

2. $\frac{1}{10000}$th, very soon, especially by stirring, a deposit of groups of prismatic crystals.

3. $\frac{1}{20000}$th, much the same as 2.

4. $\frac{1}{10000}$th, after a little time by stirring, quite satisfactory.

6. Ferrocyanide of Potassium.

1. $\frac{1}{1000}$th, gives an immediate dirty white amorphous precipitate, which dissolves in an excess of reagent, but is reproduced upon the further addition of the reagent. The precipitate is readily soluble in acetic acid.

2. $\frac{1}{10000}$th, gives a permanent precipitate with an excess of reagent.

3. $\frac{1}{30000}$th, a pretty good precipitate.

4. $\frac{1}{100000}$th, upon agitation gives a good cloudiness.

5. $\frac{1}{200000}$th, no indication after several minutes. None of the above deposits become crystalline.

7. Ferricyanide of Potassium.

1. $\frac{1}{10000}$th, gives a bright yellow amorphous precipitate, permanently soluble in excess of reagent.

2. $\frac{1}{50000}$th, by using a small quantity of reagent, a quite perceptible precipitate, readily soluble in excess.

8. Carbazotic Acid.

1. $\frac{1}{10000}$th, gives a bright yellow precipitate which does not crystallize upon standing.

2. $\frac{1}{10000}$th, a greenish yellow precipitate, soluble in excess.
3. $\frac{1}{100000}$th, gives a quite obvious amorphous deposit.
4. $\frac{1}{200000}$th, a just perceptible cloudiness.

9. Terchloride of Gold.

1. $\frac{1}{100}$th, gives an immediate yellow amorphous precipitate, which nearly all dissolves upon heating, leaving a few orange gum-like masses; upon cooling the precipitate is reproduced. There is little or no reduction of the reagent upon the application of heat; in this narcotine differs from morphia.

2. $\frac{1}{1000}$th, gives a good yellow precipitate which does not all dissolve in several drops of potash solution, nor does the solution darken as in morphia. The precipitate is soluble in several drops of acetic acid.

3. $\frac{1}{10000}$th, gives a good greenish yellow precipitate.
4. $\frac{1}{20000}$th, very soon gives a quite perceptible precipitate.
5. $\frac{1}{40000}$th, only perceptible, not satisfastory.

10. Bichloride of Platinum.

1. $\frac{1}{100}$th, gives a light yellow amorphous precipitate, which nearly all dissolves by heat, and is reprecipitated upon cooling.
2. $\frac{1}{1000}$th, a pretty fair precipitate.
3. $\frac{1}{2500}$th, no indication.

11. Tannic Acid.

1. $\frac{1}{100}$th, gives only a slight dirty white precipitate.

12. Acetate of Potash.

1. $\frac{1}{100}$th, grain of narcotine gives with acetate of potash, an immediate copious white amorphous precipitate of acetate of narcotine, which readily dissolves in a drop of strong acetic acid, but is insoluble in excess of reagent. After a little time the precipitate becomes crystalline, giving beautiful groups of acicular crystals which radiate from a common centre.

2. $\frac{1}{1000}$th, gives a distinct cloudiness, which very soon changes to a rather abundant deposit of branched crystals, and ultimately as in 1.

3. $\frac{1}{2000}$th, no immediate deposit, but very soon crystalline needles appear, and after a little time there is a very good precipitate.

4. $\frac{1}{10000}$th, in a few minutes crystals appear.

5. $\frac{1}{20000}$th, in less than ten minutes needles begin to form along the edge of the drop, and in a little time the deposit is very satisfactory.

The *acetates of baryta, zinc,* and *lead,* give much the same reactions in a hydrochloric solution of narcotine as those given above for the potash salt. In the first, second and third solutions, no difference is observed; in the fourth, the precipitate is more slow to appear, and perhaps not so abundant, especially when the lead salt is used the deposit does not appear for several minutes: in the fifth case, the same difference was observed between the potash salt and those of baryta and zinc, and no crystals were observed in the lead solution after standing one hour.

The above reactions point out a new test for acetic acid, however, we might state that the acetate of narcotine, when produced from the baryta or potash salt, is somewhat soluble by a solution of chloride of narcotine.

13. Iodine in Iodide of Potassium.

1. $\frac{1}{100}$th, gives a copious red brown amorphous precipitate, which is soluble in several drops of strong acetic acid, but not readily, in a large excess of potash. An excess of reagent should be used, otherwise the precipitate, first produced, will be dissolved.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, a brownish precipitate, which dissolves in a drop of potash solution without the production of a white one as in strychnia.

4. $\frac{1}{30000}$th, a brown yellow precipitate, quite copious.

5. $\frac{1}{80000}$th, a good green yellow precipitate.

6. $\frac{1}{100000}$th, by allowing a drop of the reagent to flow into the narcotine solution, a very perceptible precipitate is produced.

7. $\frac{1}{300000}$th, in about a half minute, the precipitate is quite obvious.

8. $\frac{1}{500000}$th, the precipitate is still perceptible.

14. Bromine in Bromohydric Acid.

1. $\frac{1}{100}$th, gives a copious bright yellow precipitate, which soon dissolves if there is not an excess of reagent.

2. $\frac{1}{1000}$th, the precipitate is readily soluble in potash, but is immediately replaced by a white one.

3. $\frac{1}{10000}$th, much the same as 2, but only a trace of white precipitate.

4. $\frac{1}{20000}$th, a dirty yellow precipitate.

5. $\frac{1}{80000}$th, gives a green yellow precipitate.

6. $\frac{1}{150000}$th, gives a quite obvious precipitate.

7. $\frac{1}{250000}$th, the precipitate is still perceptible.

15. Sulphuric and Nitric Acids.

1. $\frac{1}{100}$th grain of narcotine, when acted upon by a small drop of strong sulphuric acid, dissolves with a yellow solution, if now a small crystal of nitrate of potash be added, the crystal becomes blood red, which after a time dissolves, giving a blood red color to the solution, which after a time changes to orange, If the nitrate of potash be first dissolved in the acid, and then the mixture be allowed to flow upon the narcotine, the deposit immediately becomes blood red, and slowly dissolves, giving a solution of the same color.

2. $\frac{1}{1000}$th, dry; if the mixture of sulphuric acid and nitre be allowed to flow upon the deposit, it immediately becomes blood red, and soon dissolves giving a yellow solution.

3. $\frac{1}{10000}$th, the deposit becomes red, but very soon dissolves with a yellow solution.

4. $\frac{1}{20000}$th, gave no indication.

16. Sulphuric Acid and Bichromate of Potash.

1. $\frac{1}{100}$th, when the dry residue is dissolved by a drop of strong sulphuric acid, it gives a yellow solution, which when treated with a very small crystal of bichromate of potash, changes to a fine wine color, which remains permanent for days; if an excess of the potash salt be used, the mixture passes through several colors and ultimately becomes blue. The permanent color is readily obtained by stirring the potash crystal in the acid solution of the narcotine till it imparts a wine color, and then removing the crystal from the solution.

2. $\frac{1}{1000}$th, if a small crystal of the potash salt be stirred in a drop of sulphuric acid till it imparts a distinct color, and then the mixture be allowed to flow upon the narcotine, the deposit becomes red or brown, and then dissolves with a color dependent upon the amount of potash salt used.

3. $\frac{1}{5000}$th, the deposit gives a brown color.

The change of colors observed in the application of this test might cause the inexperienced to mistake narcotine for strychnia.

Meconic Acid.

When necessary, the meconic acid was dissolved by the aid of a gentle heat.

1. Sesquichloride of Iron.

1. $\frac{1}{100}$th, grain of meconic acid in one grain of water, will give with a solution of sesquichloride of iron, an immediate blood red

solution, the color of which is not affected by several drops of a solution of corrosive sublimate or chloride of gold.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, gives a decided red color to the solution, which when compared with a drop of the reagent is very marked.

4. $\frac{1}{20000}$th, gives a faint red solution, but not satisfactory; if several drops of the meconic acid solution be used, the color is very decided.

If the meconic acid solution be evaporated to dryness and the reagent applied to the residue,—

1. $\frac{1}{10000}$th, the deposit becomes deep blood red.

2. $\frac{1}{40000}$th, the red color is very distinct.

3. $\frac{1}{80000}$th, the color is just perceptible.

It is well known that several other substances beside meconic acid, give much the same reaction with sesquichloride of iron, those most likely to be met with are the sulphocyanides, or acetates, or their acids. The color produced by the sulphocyanides is immediately discharged by a solution of corrosive sublimate, whereas the color developed by meconic acid is unaffected; again, the color produced by acetic acid or acetates, is not discharged by corrosive sublimate, in this respect it agrees with meconic acid, however, the color produced by one drop of $\frac{1}{5000}$th solution of meconic acid, is more intense, than that produced by a drop of concentrated acetic acid: the color of the meconic acid is discharged by a drop of sulphuric acid, with the evolution of much gas, whereas, that produced by acetates is destroyed without the production of gas.

2. Acetate of Lead.

1. $\frac{1}{100}$th, gives with this reagent, an immediate yellow-white amorphous precipitate, which is insoluble in acetic, but readily in nitric acid.

2. $\frac{1}{1000}$th, gives a bluish precipitate.

3. $\frac{1}{20000}$th, in a few seconds a distinct opalescence, which in a little time collects into little flocks.

4. $\frac{1}{50000}$th, in a few minutes a distinct opalescence, which after a time collects into little bluish flocks.

There are many other substances which produce with acetate of lead white precipitates much the same as those produced by meconic acid, of these we may mention: 1. Sulphocyanides; these give a pure white precipitate, soluble in acetic acid, and when from dilute

solutions, readily in nitric acid. 2. Chlorides; a white precipitate, which when from chloride of sodium, will readily dissolve in excess of reagent, acetic, or nitric acid; if the precipitate be due to free chlorine, it will not readily dissolve either in acetic or nitric acid. 3. Sulphuric acid, or sulphates; the precipitate is insoluble in acetic, and sparingly in nitric acid. 4. Soluble carbonates; a white precipitate soluble with effervescence in acetic acid. 5. Phosphates; insoluble in acetic, but soluble in nitric acid. 6. Oxalates; same as phosphates. Of the above substances, it will be observed that the precipitates produced by sulphocyanides, chlorine, and carbonic acid, are soluble in acetic acid; that produced by sulphuric acid, is insoluble in acetic and nitric acid; those from phosphoric, oxalic, and meconic acids are insoluble in acetic, but soluble in nitric acid; chloride of calcium will give a white precipitate with either a phosphate or oxalate, but none with meconic acid.

Another method of distinguishing the meconate from the sulphocyanide of lead, is to add to the precipitate a few pieces of zinc, and then a few drops of sulphuric acid, when the meconate mixture will evolve pure hydrogen, whereas, the sulphocyanide will yield sulphuretted hydrogen.

3. Sulphate of Copper.

1. $\frac{1}{100}$th, gives an immediate copious green precipitate, which is soluble in excess and in acetic acid.

2. $\frac{1}{500}$th, a slight precipitate which increases by standing, collecting in little bluish flocks.

4. Nitrate of Silver.

1. $\frac{1}{100}$th, gives a white amorphous precipitate, readily soluble in ammonia, but insoluble in acetic acid.

2. $\frac{1}{1000}$th, in a few seconds a dirty white precipitate.

3. $\frac{1}{2000}$th, after a little time a slight opalescence, which improves by standing.

5. Chloride of Barium.

1. $\frac{1}{100}$th, after a little time, especially if stirred, a granular and crystalline precipitate, the crystals are of various forms and characteristic, many of them being dumb-bell shaped. In solutions much more dilute than the above the reagent gave no indication.

6. Ferricyanide of Potassium.

1. $\frac{1}{100}$th, after a little time, especially if stirred, green yellow hair-like crystals appear, which after a little while are abundant, these crystals are very characteristic. The ferrocyanide of potassium gives the same form of crystal, but they are much more slow to appear.

2. $\frac{1}{500}$th, no indication after some time.

Meconic acid dissolves in sulphuric acid without change of color, if then a crystal of bichromate of potash be stirred in the mixture it becomes a slight green.

None of the various tests given for narcotine, except those stated, will give a precipitate with meconic acid.

Columbus, Ohio, Feb. 17th, 1860.

An Interesting Case of Malingering. A woman passes "black balls" from her vagina, and simulates hysterical convulsions, in order to obtain opium. Reported by Wm. A. Brown, student of Medicine, McConnelsville, Ohio.

Jalap purges and Ipecacuanha vomits, saith the book—and the book saith much else besides—yet the mind wearies of vomits and purges, of fevers and inflammations, and delights occasionally to dip into the wonderful and strange. Progress is the order of society, and every day shows us "something new under the sun," Ecclesiastes to the contrary, notwithstanding. But science has never as yet come up to the consideration of certain black lumps that may be passed from a woman's vagina; and no physiologist has, in the widest range of his subject, treated of this periphenomenon we are about to describe,—a fact that may be added to the many more that show "there are more things in heaven and earth than are *dreamed* of in our philosophy." Excellent, merry old Chaucer says that—

"———————— the Doctour of Phisike,
In all this world ne is ther non him like
To speke of Phisike and of Surgerie;
* * *
He can tel the cause of every maladie
Whether it be of hote or cold or moist or drie,
And wher engendered, and of what humour."

But notwithstanding this honest assertion of the good old poet, it has been known for ages that there *are* penetralia beyond human ken. Yet by the combined efforts and labors of men of science in this enlightened age, we are slowly unfolding the mysteries of the universe, by the gradual addition and accumulation of Facts, which, standing for awhile isolated, finally, and without compulsion, crystalize into truth. Yet, it seldom falls to the lot of the man of medicine, in the course of an ordinary lifetime, to be enabled to indulge himself in philosophic reflection on a concatenation of circumstances in any particular *case* that may fall into his care, whereby he is led to the development of some great truth. Such was the fact, however, in the circumstance we are about to relate.

A pauper, named A. C., had been a charge upon Morgan county for a great many years, and had been much trouble to the authorities and a great expense to the people, as the treatment of her case had not been included in the fees for medical attendance upon the public's vagabonds. The Infirmary Directors, who were aware that she was exceedingly troublesome and required a great deal of medical attention, having long understood that she labored under a very strange "irregularity" of the uterine function, were always anxious to have her included in the regular fees for attendance, and rid themselves of the annoying expense she incurred. A certain physician agreed to do the county's business for a stated sum, not excluding A's case, and his proposition was readily accepted by the authorities. In a few days the Doctor was called to remove one of the woman's "black balls;" but while doing so she had a terrible convulsive fit, which induced him to break his engagement, saying he would not do the business for "a thousand dollars." So a successor was duly employed, who succeeded much better, however, in treating her for her "irregularity." The Doctor adopted a "palliative" treatment, and the remedies he employed were "opiates" which the poor woman assured him acted like a charm in calming the constitutional irritation attending such a harrassing "irregularity" as she was subject to, and completely controlling the distressing convulsions. The Doctor was one of those men who believe that Corporal Nymisphilosophy is not the worst that has been preached in the world. "Things must be as they may," and while his palliatives satisfied her wants did not feel inclined to trouble his brain much about the *ultimate cause* of her distressing complaint (?) but continued to enjoy his ease of body and tranquility

of mind, allowing himself to be undisturbed by transcendental pathology and speculations about the blood;—"*rerum cognoscere causas*" was not the Doctor's motto. The case was becoming somewhat notorious; although little was known in regard to it, yet many physicians had heard of "the woman who passed black balls from her vagina," and a few were the glad possessors of specimens of these mysterious lumps; but were yet, very naturally, somewhat "skeptical."

Finally, in the order of events, Drs. Brown and Little were the attending physicians, and having understood that her case presented some *peculiarities* seldom offered to the observation of the medical man, they of course felt considerable desire to make some investigations into the cause and character of this unheard of morbus, though not very *firm* in the belief of the real "existence of things" as commonly understood. But a short time elapsed until they were gratified with an opportunity to enter into the study of her wonderful vaginal formations. One day a messenger arrived with information that the woman was taken with one of her "spells" and Dr. Brown went down. He delivered her of a black ball about the size of a goose egg which was close up to the os uteri, during which procedure the woman simulated acute pain, and very near went into one of her "convulsions." The Doctor found it impossible for him to resist the belief that she was of that species of "genus homo" known to Naturalists as the "humbug."

After he had extracted this curious mass from her vagina, however, he yielded to her entreaties and gave her some opium, which she declared "always made her feel better afterwards." He then examined the ball which he found to be of the consistence of moderately dry dough, and of a blackish color; he broke it up and discovered in its substance a small piece of *sewing thread*. "Ah, what have we here," thought the Doctor as he at once realized the nature of the case and had all his suspicions confirmed. It was evident there was no physiological function by which thread was secreted; *ergo*, the woman has been simulating a queer disease in order to obtain opium. Such was the fact. She manufactured the balls out of dough, colored them black, then stuffed them into her vagina, and sent off for the physician to extract them, when she would plead with him for opiates to quiet the nervous "agitation of such a travail." The object was now to discover her method of coloring them, which seemed somewhat puzzling; but it was afterwards

ascertained, by observation about the premises, that she used an infusion of maple bark and coperas. She had been practicing this ruse successfully for the period of *ten years* previous to the time when Drs. Brown and Little took charge of the Infirmary, and I presume conceived herself to be still succeeding finely with her favorite deception, by which means she had for so long a period obtained happiness by the lump. The Doctor was amused both with the trick and the discovery and said nothing for the time being, anticipating a little professional sport would grow out of it. When he returned home he informed Dr. Little, that, as they had suspected, the woman was "tricky" and her disease all a fabrication. It was not long until she felt like indulging in opium again, and accordingly was taken with another "spell" to gratify her desire. They both went down to the Infirmary and "operatad successfully" in bringing away another black ball, and gave her some more opium, but not intimating that they were aware of her efforts to deceive them. They found a long roll of the "composition" lying alongside her thigh, about as long and thick as the forearm, which she said she brought away herself. "I can always get the long ones away myself" she said, "but the little ones I can't. I can feel *them* coming down as *cold as mud.* Sometimes the long ones break, and then, oh, Doctor I have so much trouble and pain that it aint any use of me trying;" and then she groaned piteously. "You can feel the little ones come down as cold as mud, eh," asked the Doctor; "umph! a very remarkable complaint, indeed, madam." "It takes about a weék for my womb to get full, and it's always soft at first; but afterwhile the water runs off, and leaves the hard stuff—as cold as mud, Doctor—and it makes one have fits, sometimes." In a short time afterwards, a couple of professional brethren of a neighboring city, who had seen one of the black balls, and heard of the woman, came to this place expressly to study the peculiarities of a case they had never before heard of or seen. When they arrived, the woman was informed of the fact, and she said "she had one in her now." The physicians were delighted with the opportunity to see the woman who was said to pass black balls from her vagina, and were taken down to see the "operation" of removing the same. Nothing but the pencil of a Darley could convey to you an adequate idea of the ludicrous scene which ensued. The physicians were skeptical and could not bring themselves to believe that those things were ever taken from a female. To pro-

tect them from the possibility of deception, they were assigned very advantageous positions, by the attending physicians, which they at once assumed. The woman was now placed on her elbows and knees, with her buttocks turned up to the light, and her clothes supported on her back by one of the spectators, while the other took a position about six feet from her, with his hands resting on his knees and watching attentively the parts from whence were to issue the wonder of wonders. When the manœuvre was accomplished, they had become fully satisfied that "black balls" really *did* come away, and were furnished with material for physiological theories, and learned disquisitions in uterine pathology.

The amusement now wearing out, however, the woman was informed by the attending physicians, when she had her next "spell," that they were and had been fully cognizant of her deceptions, and that she must now cease; they would suffer no further annoyance, and that if she was taken in labor with a dough baby again she would have to be her own accoucheur, as they would pay no attention to her call. She cried, and swore, and stoutly denied the accusation; but she was assured they were positive, when they informed her that if she put any more balls into her vagina she would have to take them away again herself. And so they left her pleading her innocence, and vowing she "could not make water;" (she had always been catheterised after passing her lumps of dough;) and came home under the impression that she would now become pregnant with black balls no more. She now found that her narcotic supplies were about to be cut off by the turn of affairs, and in the course of a week or two fell upon another method. A messenger came up one day and announced that the woman had "falling of the womb." "What shall we do," asked Dr. Little when he communicated to his colleague the messenger's information. "Pull it out!" replied the Doctor, "I will insure the result." So down the Doctor went, and examined his patient. He found what she called her "womb," extending half way down the thighs, and as soon as he felt it did not hesitate to adopt the advised treatment. "Oh, it must be *returned*, by all means," said the Doctor, for he knew if he would advise "extirpation" she would have had one of her "convulsions" immediately, and refused to have let him touch it. She was of the Doctor's opinion, and thought herself that it ought to be returned. So getting a firm hold of her womb and bracing his shoulder against her knee, he made a sudden jerk, and away it

came! Good heavens! did the man tear away her uterus? He pulled the thing out from under the bedclothes and examined it while she was going through a delightful convulsion. It proved to be a *beef's rectum* with one of her long rolls of dough in it, which she had run up into her vagina. "Oh! my God!" she exclaimed, "I'm caught again! To hell with my luck! I'll give it up, now, Doctor. I swear I'll do so no more!" And the Doctor, swelled up with a big laugh, retired to ventilate his humor.

They had no more trouble with her afterwards, but furnished her with a little opium occasionally, in diminished doses, and in the course of time, I believe, succeeded in breaking up her bad habit.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Lecture on Cerebral Symptoms independent of Cerebral disease. Delivered at the Hospital for Sick Children. By CHARLES WEST, M. D.

GENTLEMEN:—Of all the inquiries which, in private practice, the parents of a sick child will put to you, there is none that will be made so often or so eagerly as this: "Do you think his brain is affected?" The answer which you give to this question will at once convey a sense of unspeakable relief, or will produce a feeling of blank hopelessness; either, perhaps, excessive, but either most natural. Without doubt, the importance of a correct reply is very great, for your prognosis and your line of treatment are dependent on it, and an error, even though corrected in twenty-four hours, may be irreparable. I think, then, that the time will not be misspent which we devote to-day to an examination of the different circumstances wherein we are most likely to meet with the symptoms of cerebral disorder, independent of real cerebral disease. Now you may encounter such symptoms in two different conditions; either in the course of acute affections simulating active disease of the brain, or in the course of chronic ailments, where there may seem to be reason for apprehending the advance of slow disorganization; and each class of cases demands a seperate consideration.

Before examining either class of cases in detail, I would, however, remind you that in the child, as in the adult, the brain is disturbed more or less in the course of every acute affection of the general system; and further, that, in proportion to the youth of the child, there will be an apparent sameness in the characters of such dis-

turbance, and a consequently increased difficulty in determining the cause whereon it depends. Thus, for instance, whether one of the exanthemata is about to come on, or influenza, or inflammation of the lungs; or whether the illness is a mere febrile attack conseqent on dentition, there will in all these circumstances alike be a hot skin, and a frequent pulse, a loss of cheerfulness, a heavy head, a disposition to drowsiness, and yet a state of unrest; symptoms, in short, which are just the same with those that, in the infant, would attend the early stage of actual disease of the brain.

But, while I refer to this fact as one never to be lost sight of in the endeavor to discover the true import of the cerebral disturbance which accompanies almost every form of acute illness in early life, my special object to-day is to point out to you some of the circumstances wherein, in infancy or early childhood, a correct diagnosis is peculiarly difficult.

I propose to notice, very briefly—

1st. The cerebral symptoms that usher in the attack, or accompany the early stages of fevers.

2d. Those which, at the onset of acute inflammations of the thoracic viscera, sometimes throw the evidences of the real disease into the shade; and

3d. Those dependent on some disorder of the abdominal viscera, which, though not always itself of an acute character, yet gives rise to sudden disturbance of the nervous system, and to symptoms that simulate active cerebral disease. Such are sometimes the consequences of unsuitable food, of diarrhœa, of colic, and of intestinal worms.

Afterwards, if time allow, I purpose

4th. To make a few observations on the more chronic ailments in which cerebral symptoms are likely to be observed; and their import is apt to be misapprehended.

Now, with reference to cases of the *first* class—namely, to those in which cerebral symptoms usher in the attack, or accompany the early stage of fevers—I may observe, and the remark holds good in other cases also, that in proportion to the suddenness of the onset, and the violence of the character of such symptoms, is the probability of their depending on real disease of the brain so much the smaller. A severe attack of convulsions is rarely an early symptom—is almost never the first symptom—of real acute disease of the brain. Its occurrence, therefore, always raises a presumption that its cause is to be sought in some source of irritation external to that organ; that, how much soever the immediate urgency of the case may require remedies addressed to the brain, the ultimate dangers of the disease will be found to depend on some other cause, to arise from mischief seated elsewhere than in that part which at first seemed to be the most suffering.

The early stage of the eruptive fevers sometimes affords a very remarkable illustration of the amount of disorder of the nervous system, which may precede or accompany the full outbreak of the rash. During the first day of the eruption of measles, for instance

one or two attacks of convulsion sometimes occurs, though they usually pass away without being followed by protracted coma, or by any other abiding signs of cerebral disorder. In these cases, the previous existence of the morbillous cattarrh, often even the presence of faintly-marked stigmata of the rash, the general heat of skin more intense upon the trunk than even about the head, will usually preserve from error, and you may speak with confidence as to the probably speedy disappearance of the cerebral symptoms. Far more serious, however, are the signs of cerebral disturbance by which smallpox and scarlatina are occasionally ushered in; the transition from apparent health to violent convulsions being sudden, and apparently causeless, the fits themselves most formidable, and the coma by which they are succeeded very profound. Such was the case of a little girl, two years old, who, until the day before that on which I saw her, had never had an hour's illness. She had eaten a hearty dinner, and, though she vomited soon afterwards, did not seem otherwise indisposed, and slept well in the night. Immediately on waking in the morning, however, she had a fit, during which she was insensible, much convulsed; and insensibility, with occasional convulsions, and great heat of skin, continued for the ensuing twenty-four hours. Depletion, both general and local, the latter twice repeated, was followed, at the end of twelve hours more by considerable diminution of the convulsive movements; and, forty hours after the first fit, the child fell asleep, and dozed quietly for a few hours. She awoke sensible, and continued so. On my visit in the morning, I found her quiet and sensible, without any sign of convulsion; her face was very pale; her head, before so hot, was now quite cool; her pulse had sunk in frequency, and had lost its fulness. An eruption of a papular character had appeared on the hands, arms, inside of the thighs, and slightly on the face. This eruption was the smallpox, and the disease ran its course without an unfavorable symptom.

The comparative rarity of smallpox may be some excuse for my not having been prepared for the possibility of the convulsions depending in this case on the cause to which they were really due; but it is well to bear in mind that in every instance where cerebral symptoms come on without obvious reason, in early life, inquiry should be made as to the date of previous vaccination, and the arm should be examined for its evidence in the cicatrices left by its performance. A similarly stormy onset, however, is sometimes observed in cases of scarlet fever; and then it usually preludes an attack of a malignant kind, characterized by speedy loss of power, and tending to an early death. This occurrence, indeed, never very common, is most rare when scarlet fever is merely sporadic, but in epidemics of the disease it happens more frequently, and this even although the general characters of the disease are of a mild—not at all of a malignant—type.

"In the autumn of 1831, and during the early part of 1832." says Dr. Von Ammon, "scarlatina prevailed epidemically at Dresden. The cases which at first presented themselves to my notice,

were, for the most part, mild in character, and ran a favourable course; but, at the same time, I met with some instances where death took place very rapidly, and under peculiar symptoms of cerebral disturbance, in children who neither, during life or after death, showed the slightest trace of scarlatinoid eruption. At first I felt in doubt as to the cause and nature of the rapidly-fatal head affections, for I did not anyhow connect them with scarlet fever, while the disease differed from inflammation of the brain in the extreme rapidity of its onset, in the fact that, notwithstanding the intensity of the headache, it was unaccompanied either by nausea or vomiting, that the bowels were not constipated, and that the pulse beat with such frequency that it was almost impossible to count it, while the attitude of the patient was not at all such as is usually assumed by any one suffering from acute cerebral inflammation."

Dr. Von Ammon then goes on to say how a post-mortem examination of one of these cases led him to the suspicion, which afterwards became a certainty in his mind, that these were really instances of scarlatina; that the impression of the poisoned blood upon the brain and spinal cord destroyed life before time had elapsed sufficient to allow of the ordinary manifestations of the disease. The possibility that the clue to the understanding of symptoms of formidable cerebral disorder is to be found in the approach of one of the eruptive fevers, enforces the necessity, for learning in every case the history of a child's previous ailments, and renders it even more imperatively your duty to do so at a time when scarlatina is epidemically prevalent. Rapid, too, as is sometimes the advance of inflammation of the brain, its progress is commonly far slower than that of the cerebral symptoms which accompany the onset of the fever, while almost invariably some characteristic or other of the mere local inflammation would be absent, some anomaly would show itself, such as excited the suspicion of the German physician, and ought to awaken yours.

But besides the instances just referred to, in which the temporary violence of the cerebral symptoms suggests the idea that active inflammation of the brain is present, there are others of less rarity, where, though the feeling of anxiety as to the real nature of the disease is less urgent, it is yet of longer duration. Such are the cases in which, during the early stage of typhoid fever, the symptoms of cerebral disturbance so preponderate that for some days a doubt may be entertained as to whether the fever is sympathetic with disease of the brain, or the brain is disordered as a consequence of the fever. The question, in short, is between tubercular hydrocephalus and typhoid fever. Now, something may be gathered from the age of the child, at least towards raising a presumption one way or the other, for the older the child is, the more likely is the disorder to be typhoid fever; the younger it is, the more likely to be hydrocephalus; and I strongly recommend you, in doubtful cases, to put the issue between these two definite diseases, and not to indulge your indolence and put to sleep doubts which

you feel unable to solve, by talking to yourself or to your patient's friends of gastric fever, worm fever, and so on—terms to which no definite import is attached either by yourselves or by others. There is not time to pass in review minutely all the diagnostic symptoms which mark typhoid fever, and serve, in spite even of much cerebral disturbance, to distinguish it from hydrocephalus. It may, however, suffice to remind you that vomiting is generally absent, is never obstinate, nor succeeded by long continued nausea; that the bowels are often relaxed, never obstinately constipated, and that the evacuations are light-colored, fecal, but usually watery. Further, the abdomen is full, usually tender, and flatus is always to be felt in the intestines; the tongue is not often much coated, it is red at the tip and edges, and early shows a tendency to become dry. The skin is very hot, the heat is pungent, the pulse is frequent, and continues so throughout, but is never irregular nor intermittent. Even the very cerebral symptoms have their characteristic features; for the early occurrence of delirium, which is so general in typhoid fever, is another point wherein it differs from hydrocephalus, in which much pain of the head, much drowsiness, a marked change of temper and disposition, yet coexist with a perfect intelligence.

"Surely," you may say, "these differences are marked enough; to dwell on them is superfluous, nay, wearisome; the help we want is in real diagnostic difficulties, not in cases so obvious, whose right interpretation is so easy."

Believe me gentlemen, nine-tenths of the errors of diagnosis are made in easy cases; in cases whose features are sufficiently marked for recognition, if the observation had been trained to notice them, or the mind been disciplined to the inquiry in every instance: Why do I believe the disease to be this, why not that, or the other? The power of intuition and the habit of guessing are two very different things, though sometimes mistaken for each other. The former is now and then the reward of years of patient observation; humility and dilligence are its parents. The latter is engendered between indolence and self conceit; he who takes up with it, whatever be his abilities, forfeits all chance of ever attaining the other; he adds not to his knowledge from being right, he gathers no lesson from being wrong; for him "experience yields no fruit, age brings to him no wisdom."

There is a second class of cases in which the predominance of symptoms of cerebral disturbance sometimes masks the real nature of the disease, and such cases are met with among the acute inflammations of the thoracic viscera. Risk of being led astray would indeed be almost entirely avoided, if you made it an invariable rule, in all the acute ailments of early life to regard your examination as incomplete until after you had made a careful auscultation. The symptoms of disturbance of respiration are indeed often too marked to be overlooked; the cough, the pain in the chest, and the hurried breathing render mistake impossible; but it now and then happens at the commencement of pleurisy, and in pneumonia, especially of the upper lobes, that the nervous system sympathizes so deeply as

to draw away the attention from those symptoms which, though obvious enough to him who seeks for them, do not stand out so prominently as to attract the first hasty glance. Pneumonia and pleurisy, especially the latter, occasionally set in with a convulsion; but you will, I trust, remember the caution which I have already given as to the sudden violence of cerebral symptoms indicating that the brain is disturbed by some eccentric cause, rather than by mischief seated in that organ itself. Pleurisy, more particularly when affecting the right side, is sometimes ushered in by vomiting, and this vomiting seems all the more suspicious if it has just preceded or just followed an attack of convulsions. It is accompanied by fever and by intense headache; the child cries aloud or screams much in its sleep, and if it is old enough for the symptom to be observed, delirium is not unlikely to be present. The cough may be but slight, or altogether absent, and even the pain not considerable, and it is then quite possible that the disturbed breathing may be put down to that sympathetic disorder of respiration to which the name of "cerebral breathing" has been applied. Need I say that it is much harder to correct a diagnostic error into which one has fallen, than, by care, to avoid it in the first instance? If the case is one of pneumonia affecting the upper lobes, severe headache, drowsiness, great heat of head, though found, if carefully observed, not to be greater than of the surface elsewhere, all serve to mislead. Delirium, too, is very often present, if the child is old enough for that symptom to manifest itself; and the mind of the attendant fluctuates in such cases between the ideas of cerebral congestion, of hydrocephalus, and of typhoid fever; one impression preponderating at one part of the day, another at a different one; but the true view of the case not presenting itself to the mind at all. In the case of pleurisy, even though the mistake is discovered late, the child will probably survive, and the distended side, the adaptation of posture, the subsidence of the fever, and the disappearance of the head symptoms are tolerably sure to put the doctor, though tardily, on the right track. In pneumonia, the error is even more serious, for the disease is more formidable, and the longer continuance of cerebral disturbance is likely to keep up the mistake. In its later stages, the convulsion and the coma which sometimes come on as the results of the imperfect depuration of the blood, perpetuate the misapprehension, which, perhaps, a post-mortem examination alone brings to light.

Now, without going into minute detail, for which there is no leisure, I may observe that in these cases you will find something always wanting of those symptoms which characterize real cerebral disease. Perhaps there has been a convulsion; but it was not followed by coma, nor by paralysis of either side. Vomiting has occurred, but it has soon subsided. The head is hot, but yet not hotter than the rest of the surface, and it is unaccompanied by violent pulsation of the carotids. The light may be unpleasant, but it is not shunned with that intense sensitiveness to its presence which closes the eyelids even in the darkened chamber. Again, though

the breathing is sometimes hurried in cases of cerebral disease, yet here the hurry is constant; if the case is one of pneumonia, it is extreme, and between the hurried breathing and the rapid pulse a constant proportion is observed, while, though the cough may be but slight, some cough is almost surely present. Such, and such like, are the criterions by which, if you test the symptoms in these doubtful cases, you will run but small risk of not coming to a right conclusion.

Nearly forty years ago, a French physician wrote an essay, the object of which was to illustrate what he termed the predominance of the digestive organs over the brain in childhood, and he appended to it the details of forty-eight cases in corroboration of his opinions. Now, although like all other books written to develop one idea, this is somewhat one-sided in its views, and, perhaps, a little overcharged in its statements, yet the main point is correct—namely, that

The *third* class of cases, in which symptoms of cerebral disease are provoked by disorders of the digestive organs, is very numerous and very important.

A slight acquaintance, even, with the practice of medicine will have familiarized you with various symptoms of disturbance of the nervous system which derangements of the digestive organs and their appendages bring with them. Such are the unquiet sleep, the night-terrors, the grinding of the teeth, the sleeping with half-closed eyelids, the thumbs drawn more or less into the palm, which one often observes in infancy and early childhood, and some of which are seldom altogether absent during dentition, or when changes are first made in the diet of infants. But there are, besides, two distinct classes of symptoms to which disorders of the digestive organs, when severe, may give occasion—namely, convulsions on the one hand, and, on the other, that form of cerebral disturbance characterized by mingled exhaustion and irritation, to which the name of the hydrocephaloid disease, or spurious hydrocephalus, has been given.

Convulsions from this cause are generally the result of unsuitable food, or of an over-full meal in infancy or early childhood; though other sources of irritation, as that of worms, or even of a calculus in the kidney, may produce them. Those which depend on indigestible food, are sometimes so severe as to threaten life, or even actually to destroy it. They nearly proved fatal in the case of a little boy, five years old, previously healthy, who, on July 9, 1846, dined off some boiled salmon, of which the rest of the family partook more heartily than he without any ill effects. At ten o'clock on the following morning, having slept well during the night, he was suddenly seized by a violent convulsion, in which his whole surface became exceedingly livid, and his lips of a deep purple hue. His respiration was greatly affected, he seemed as if he could not get air enough into his chest to keep him alive, and he appeared every moment as if he would be suffocated; while his pulse was feeble and frequent, and the temperature of his body low. Under the influence of the

cold douche to his head, his breathing became less laborious, his lips regained much of their natural florid color, the convulsions greatly diminished, and the child began to make some half-conscious movements. It was now possible to give him an emetic, which caused free vomiting twice, and the rejection of some of the undigested salmon. The child was next placed in a hot mustard bath; while in it, the convulsions completely ceased, after having lasted three hours and a half. He was now put in bed, where he slept quietly for four hours, and awoke quite well.

Now, that which took place here you may observe not very rarely, and with symptoms of equal severity, in early infancy, when, perhaps, the error in diet has been so trivial that you can scarcely realize the possibility of its producing such formidable results. The fact, however, that in any given instance, the convulsions depend on such a cause, may usually be gathered partly from the history—which, in early life, is all the more important from the patient's inability to speak for himself—but still more from our observation of their characters. They are apt to be violent, accompanied with much spasm of the extremities, clenched hands, or the thumb drawn forcibly into the palm, and the great toe widely separated from the other toes. They are associated with spasm of the larynx, which often remains closed till suffocation seems impending, and with much trouble of the respiratory movements; in other words, with evidence of all the spinal system of nerves being in a state of great irritation. Almost always, too, the abdomen in such cases is distended, often extremely tympanitic, and there is frequent escape of flatus from the intestines. These peculiarities, if borne in mind, will often give you a clue to the meaning of a violent and apparently causeless convulsive attack. They indicate the source of the disturbance to be eccentric, and thus both guide your treatment and influence your prognosis, enabling you to hold out the hope that, if the child do but surmount its present danger, recovery will be complete as well as speedy.

I referred to a second class of symptoms dependent on disorder of the digestive organs; symptoms less formidable in appearance, perhaps, but more delusive, by which irritation and exhaustion together simulate the effects of inflammatory disease of the brain. It is in diarrhœa, and especially in relapses of diarrhœa, that these two conditions are associated in the greatest degree, and that the risk of error is, perhaps, most considerable.

One case in illustration of it must suffice, for time draws short.

A little girl was seized with diarrhœa on August 8, which at first was severe, but soon yielded to treatment, and she was again convalescent; when, on the 15th, vomiting and purging returned with great violence, and were attended with much febrile disturbance. On the following day, she was still worse in all respects, but was not brought to me again until the 17th. She then looked exceedingly ill; her face was sallow, but with a flush on each cheek, and her eyes were deeply sunk. She lay in a half-dozing state, with her eyelids half closed, and the eyeballs turned upwards, so that nothing

but the sclerotica was visible; but from this condition she awoke frequently and suddenly, in a state of great alarm, and looking as if she were about to have a fit of convulsions. Her skin was hot, and very dry; her pulse very frequent, but not strong; and there was some subsultus of the tendons of the wrist. The abdomen was rather tympanitic; the tongue red, coated with white mucus; the thirst great; the vomiting very frequent, and the bowels acted two or three times in an hour, the evacuations having the appearance of dirty water.

The persistence of the diarrhœa, and the great frequency of the action of the bowels, coupled with the fact that I had observed the case from the commencement, would have rendered error inexcusable. But such cases may come under our notice only when the evidence of cerebral disturbance is already very striking, and when, perhaps, the diarrhœa is no longer very urgent—perhaps may for a few hours have altogether ceased—in such circumstances, error is very possible, and its consequences may be very disastrous. If you regard the cerebral symptoms as the signs of active disease, and withhold the Dover's powder or the opiate enema, that might have checked the diarrhœa and soothed the irritability, while you apply cold lotions to the head, and give the child nothing more nutritious than barley-water in small quantities, because the irritability of the stomach, which results from weakness, seems to you the indication of disease of the brain—the restlessness will before long alternate with coma, and the child will die either comatose or in convulsions.

This is not, indeed, the only form which this spurious hydrocephalus assumes, although it is that in which the signs of irritation so mask those of exhaustion as to render the risk of mistake most serious; while the time during which the error can be rectified is in these cases very brief. In a larger number of instances, this condition comes on much more slowly, since it results from the gradual influence of imperfect nutrition; and in these circumstances the signs of irritation of the nervous system which characterize its early stages are less marked, though not, on that account, less deceptive. In the infant brought up by hand, or imperfectly nourished at the breast, the first stage sometimes continues for weeks, attracting, perhaps, little notice; giving rise, indeed, to a vague suspicion that something is wrong, but yet this suspicion so indefinite that neither the parent nor the doctor pushes the inquiry far enough to decide what that something is; or, possibly, commencing dentition bears the blame of the whole set of symptoms. I would have you, too, bear in mind that, in these cases, dentition may really have much to do with the production of the symptoms, though not exactly in the way which at first suggests itself. The insufficient or unsuitable food heightens the irritability of the nervous system, and renders it preternaturally sensitive to the disturbance which teething seldom fails to bring with it. This disturbance acts, though more slowly, just as does that which accompanies diarrhœa; it exhausts the nervous power by all the manifestations of reaction which it produces, as the continued

galvanic current wears out for a time the contractility of the muscles. The symptoms do not betoken real disease of the brain, though they closely resemble those which it occasions; so closely, indeed, that to read their import aright, you sometimes need go back for weeks, or even months, to gather the child's early history, and to learn how it has been fed, and how it has thriven from its birth. You will find, too, both in the past and in the present, intermingled with the general signs of cerebral disturbance, the evidences also of spinal irritation such as I have already referred to; and they should always lead you to suspect that the brain is disturbed in sympathy with some cause external to it. Irritability, restlessness, feverishness, a flushed face, a frequent pulse, undue sensitiveness of the surface, moaning, starting in sleep, all point to disorder of the nervous system, but they do not specially point to disease of the brain; their real meaning must be gathered from a consideration of the whole condition of the patient. That condition will be found to vary very much; the face will not be always flushed, nor the head always hot, nor the fontanelle always tense or pulsating. Vomiting may occur, but it will be occasional; the bowels will be relaxed rather than constipated; the abdomen not shrunken, but distended with flatus; a state which should always turn your attention from the brain itself to some source of irritation external to it; since, as the distinguished German physician, Goelis, has remarked, a collapsed state of the abdomen, and the absence of flatus from the intestines, are signs almost pathognomonic of hydrocephalus. Often, too, the carpopedal contractions and the laryngeal spasm are present, or have existed, to warn you as to the real nature of the case; while the pulse, though feeble and frequent, retains its regularity of force and rythm, and thus differs remarkably from the irregular, intermittent, or unequal beats, which are among the earliest and least fallacious signs of real cerebral disease. If misinterpreted, and, consequently, wrongly treated, the stage of exhaustion comes on by degrees, and with it a stealthy stupor. The flush no more returns to the surface, the extremities grow cold, the pulse becomes feebler, the pupils permanently dilated, the respiration sighing, the voice husky, deglutition difficult; symptoms which, if the earlier stage was misinterpreted, will probably be regarded as the signs of the last stage of hydrocephalus; though the depressed fontanelle, the cool head, the pulse still frequent in spite of its feebleness, the abdomen still containing flatus, the bowels still loose, will tell at once a different tale to some other practitioner, who, with no larger experience than your own, yet with a mind unbiased by a foregone conclusion, comes to the case, and at once reads its meaning aright.

I had wished to have said something about cases of a chronic character, in which symptoms occur that give rise to unfounded suspicion of diseases of the brain, but there is to-day no time to do more than enumerate some of them. Such are the groundless suspicions which parents often entertain, and which the doctor himself is not always as quick as he might be to negative, in cases of essential

paralysis in infancy and childhood. Such are the fears excited by the temporary though often long continued dulling of the faculties, which often follows fever or some exhausting illness. Such are the apprehensions which fits of waywardness or altered temper excite: such, too, on the other hand, is the dread which the excitability of a child, whose faculties are just awakening to the wonders of the world around him, sometimes occasions his relatives; and such, lastly, is the morbid anxiety with which the severe neuralgic headache of childhood is watched by persons who can scarcely be persuaded but that suffering so intense, and the return of which medical care so often fails to prevent, must needs depend on a cause as serious as it obviously is difficult of removal.

You see, gentlemen, my catalogue is a long one, and, I think, not unimportant. I must hope, at some future time, to pass it in review, as I have to-day tried to do with the other class of cases of a more acute kind. Some of the details may, I fear, have seemed tedious; but my excuse is, that the errors against which I have tried to warn you, are the same as, in past years, I have myself committed. I have not stated imaginary dangers. I have tried to warn you against such as have proved themselves, to me, very real ones, and to make you, to the best of my powers, the inheritors of my own experience.—*Med. Times and Gazette, Dec.* 24, 1859.

Hypnotism—A new Anœsthetic.

PARIS, DECEMBER 16, 1859.

Three winters ago, table-turning and tipping were the great source of amusement and investigation in the gay, as well as the scientific world of Paris. That immense humbug having, however, been pretty well used up, Paris has now got hold of something else, which, uniting the scientific with the amusing, and gratifying curiosity and the love of the marvellous, promises to become as popular as the turning table did, and, there is reason to believe, will be attended with more important and beneficial results.

The medical faculty of Paris are now earnestly engaged in experimenting upon a new method of anæsthesia, which promises, to a certain extent, to do away with the use of chloroform in surgical operations; and as the system has been introduced, and the experiments are now being made by regular physicians and surgeons in high standing, the statements of the results are not only of interest, but entitled to great respect. The new mode of producing sleep and insensibility consists in placing a small, brilliant object before the eyes of the person upon whom the experiment is to be made, a few inches above the root of the nose, so that the patient cannot regard it without squinting. The eyes being fixed upon this object, the pupils immediately commence contracting, but soon after dilate, and in from one to five minutes a state of catalepsy is produced, so that the

limbs of the patient, being raised or bent in any position, remain fixed as they are placed. This, however, is only the most unimportant portion of the phenomena produced. Insensibility to pain ensues, during which surgical operations may be performed without the knowledge of the patient and without the exhibition of as much sign of sensation as is usually exhibited under the influence of chloroform. Doctor Azam, of Bordeaux, and M. Broca, of Paris, were the first to call the attention of the faculty to these extraordinary facts. The celebrated surgeon Velpeau communicated them to the Surgical Society, and recommended that experiments should be made, as they have been, by M. Velpeau, M. Follin, Verneuil, Faure, Trosseau, Denonviliers, Nelaton, Azam, Robin, and other surgeons in the various hospitals of Paris. Hypnotism is the great subject of the day, and having witnessed the experiments referred to below, at the Hospital Neckar and the Hotel Dieu, I can vouch for the perfect accuracy of their description.

The following description of the cases already experimented upon, I translate from the *Gazette des Hopitaux*. The first case mentioned is communicated by M. Broca to the Surgical Society. The first subject, says the *Gazette*, was a woman twenty-four years of age, who had a large burn on her back and lower limbs, with a large and very painful abscess. Exhausted by pain, and besides very obstinate, this woman dreaded very much the opening of the abscess. She was told that she was to be put to sleep. A little copper cylinder was placed at a distance of fifteen centimetres (between five and six inches) in front of the root of the nose. The patient, in order to fix her eyes upon this object, was obliged to squint strongly, and the pupils were soon powerfully contracted. The pulse, already rapid, was at first slightly accelerated, but immediately afterward became much more feeble and much slower. At the end of two minutes the pupils commenced to dilate, and the left arm, raised almost perpendicularly above the bed, remained fixed in that position. In less than four minutes the responses were slow and almost painful, but perfectly sensible. The respiration was short and quick. At the end of five minutes, M. Follin pricked the skin of the left arm, which was still remaining in a vertical position. Another puncture which drew blood was unnoticed by the patient. The right arm was placed in the same position as the other, and the abscess was uncovered, the patient making no resistance, but saying very tranquilly that they were going to hurt her. At the end of seven minutes from the commencement of the experiment, M. Follin opened the abscess. A low cry, which continued less than a second, was the only sign of reaction which the patient gave. There was not the slightest quivering in the muscles of the face or the limbs, and the two arms remained as they were, without the least displacement, and retained their position for several minutes afterward. Two minutes after, the position was still the same; the eyes were widely open and slightly moistened, the face was motionless, the pulse as before the experiment, the respiration perfectly free, the patient remaining insensible. The left heel was raised, and remained

suspended in the air, and the cataleptic condition of the limbs continued.

M. Broca now took away the copper cylinder, which all this time had been kept before the eyes of the patient. He then gently rubbed the eyelids and blew upon them, upon which the patient moved slightly, and was asked if anything had been done to her, to which she replied, that she knew of nothing. Up to this time the three limbs remained in the attitude which had been given them. Another puncture was made upon the left arm, which the patient did not perceive

Eighteen minutes after the commencement of the experiment, and twelve minutes after the operation was completed, the eyelids were rubbed and blown upon again, upon which the patient awakened almost instantly, and the rigid limbs fell at once. The patient rubbed her eyes and became perfectly sensible. She remembered nothing which had occurred, and was astonished to hear that she had been operated upon. Her condition up to a certain point was comparable to that of persons coming out of an ordinary anæsthetic sleep; but the waking was much more prompt, and without agitation or loquacity. The anæsthesia had continued at least twelve or fifteen minutes.

The same patient was placed a second time in a hypnotic condition, which was reached more rapidly than before. At the end of two minutes the arms were placed in a cataleptic state, and the patient did not feel the puncture of pins which were made in the right arm. The waking, which was spontaneous, was prompt, and no new features were manifested.

Another patient, Annie F———, aged 19 years, operated upon for a lachrymal tumor, now nearly cured, was put four times under the influence of hypnotism. This was the first woman upon whom Messrs. Broca and Follin had studied the effects of this curious phenomenon. In the four experiments the results were the same. A spatula was placed about five inches before and above the eyes.

At the end of one or two minutes there was a cataleptic condition of the limbs, sleep with snoring, and a complete insensibility to the pricking of pins and pinching of the skin. A feather introduced into the nostril awakened no sign of sensibility. This patient was awakened by slight frictions and blowing of cold air on her eyes. In the last experiment with this patient, at the moment when the sleep commenced, M. Follin softly closed the eyes, removed the object upon which they had been fixed, and the phenomena of catalepsy and insensibility still continued some minutes. During her sleep the patient had but a very confused idea of what was passing around her. She thought she felt the surgeon touching her, but had experienced no pain.

Two attempts at hypnotism were made by Messrs. Azam and Follin upon a young girl of eighteen years, who had a sore foot. The results were not so satisfactory as in the preceding cases, but each time the patient experienced a noticeable slackening of the pulse, a slight cataleptic condition and partial insensibility.

Two other experiments, followed by very positive results, were made on the 8th of December by Dr. Azam. With the first young woman the catalepsy commenced at the end of a minute and a-half, and at the end of two or three minutes the catalepsy and insensibility were complete. The woman was insensible to the pinchings and punctures, and was seated on a chair, her arms raised, the fingers spread apart, the left leg was raised from the floor—in fact in a very tiresome position. At the end of five minutes she was awakened.

Upon another woman the insensibility was complete at the end of two minutes; but instead of the cataleptic condition being produced, there was a muscular weakness which made it necessary to support the patient. M. Azam gently lowered the eyelids and removed the spatula which was before her eyes. The patient remained insensible during several minutes, and could probably have been kept longer in that condition. She was equally with the others insensible to the prickings, pinchings and ticklings of the nostrils, and the soles of the feet, and upon waking she had no knowledge of what had taken place.

On the 7th of December, Dr. Azam, having informed M. Trousseau (one of the most celebrated of the Parisian medical professors) of some of the preceding facts, made an experiment at his request. The subject was a young woman who, for a long time, had been under treatment for epileptic fits, and who had no previous information of what was to take place. M. Azam requested the girl to gaze directly upon a pair of scissors, which he held at a distance of ten inches from her eyes. At the end of a minute and a-half M. Azam raised one arm, which remained in the position in which he placed it. M. Trosseau then raised the other, which also remained horizontally extended. The soles of her feet were tickled, she was severely pinched, and pins run into various parts of her body and still the insensibility continued, and after three minutes M. Azam awakened the patient by blowing upon her eyelids. She at first made severe, long inspirations, stretched her limbs and complained of great weariness and fatigue. She then remained for some time in a state of stupor, which continued longer than it usually did after the attacks of epilepsy.

The following morning M. Trosseau himself renewed the experiments, and having placed a brilliant object before the eyes of the girl, at the end of a minute the same phenomena occurred. He remarked that the sleep was produced even more rapidly, and this has appeared in several cases, proving that the oftener the experiments are repeated, the more rapidly is sleep produced.

The facts in relation to the hypnotic phenomena are fully established by these experiments, and I have seen M. Velpeau succeed in two experiments at the Hospital de la Charité, and have also seen several failures. It is not probable that the new agent can be profitably used excepting in comparatively few cases; but it is impossible to foresee what will be the results of the experiments now in progress.

The discovery, it seems, is not a new one, having been made some

eighteen years since by a Scotch surgeon named Braid, who wrote a book upon the subject, entitled "Neuryprology, or the Rationale of Nervous Sleep, Considered in Relation to Animal Magnetism," but the subject, it seems, became "hypnotised," and has only been awakened in these latter days by Messrs. Azam and Broca, with the results which I have given above. There is no doubt, I suppose, but the new agent will be considerably experimented with upon your side of the water.

Substitute for Anæsthesia.

The Boston Traveller publishes the following:

Rue de la Chasseau d'Antin, *Paris*, Monday, Dec. 12, 1859.

I can not let this steamship leave here and not acquaint you with one of the most extraordinary discoveries recently made. Monsieur Velpeau, the eminent surgeon, whose fame is as wide as the world, made the strange communication. He stated that an honorable surgeon or physician (he vouched for the gentleman's character,) named Broca or Rocca, had made the following experiment: He had placed before the face of a person, between the person's eyes, and at a distance of fifteen or twenty *centimetres* (a *centimetre* is a French measure of length—0.393,708 inch in value) a rather brilliant object (*un objet un peu brilliant.*) Make the person look fixedly at this object. In a few minutes the person will squint, and will soon fall into catalepsy and be spontaneously deprived of all sensibility.

In the experiments made, the insensibility of the patient was so great that the patient's head was alternately moved from one side to the other, and his whole person was moved. He had no recollection of any of them when he returned to his normal state.

This singular discovery made Mons. Rocca or Broca suspect that this state of insensibility might be as perfect as that obtained by anæsthetic agents. He determined to make experiments with it, and found that the state of insensibility produced, was as perfect as that obtained by the use of ether and chloroform.

Three experiments out of five attempts are reported as successful. In one of these cases a man underwent a surgical operation for an abscess, which required an important incision. The insensibility lasted ten or fifteen minutes after the operation. The patient was entirely unconscious of all that had taken place.

The experiments mentioned by Mons. Velpeau may be easily repeated by anybody. Their importance in point of economy and money and life is serious. Chloroform and ether are both costly articles, and their use is attended with danger. They have destroyed more than one life, and medical men are still unable to vaticinate in what states of the body they may be used innocuously, and when they will extinguish life. Besides, their use in the lesser surgical operations, such as the extraction of teeth, is generally considered, out of the city of Boston, to be eminently injudicious.

What a blessing this new discovery will prove, if time and experiment avouch all its present advantages.

Mons. Velpeau, in announcing the new discovery, said: "It is a strange phenomenon, so strange a phenomenon that I feel obliged to take some oratorical precautions in speaking of it to the Academy of Sciences. I feel obliged to draw assurance from the talents and honorable character of Mons. Broca, who has charged me with the duty of giving his discovery useful publicity, and at the same time of assuring his right to the discovery of this remarkable phenomenon."

Mons. Velpeau, therefore, does not present the new system of anæsthesis for a panacea, but he says to medical men: "Use it, study it, experiment on it on useful occasions, and perhaps you may contribute to endow science with a new means of alleviating suffering humanity. SPIRIDION.

Acupressure: A New Method of Arresting Surgical Hemorrhage. By Dr. SIMPSON, of Edinburgh.

At the first winter meeting of the Royal Society of Edinburgh, held on Monday, the 19th December, 1859, Professor Simpson made a lengthened communication on Acupressure, as a new mode of arresting surgical hemorrhage. After describing the various methods of staunching hemorrhage in surgical wounds and operations, which the Greek, Roman, Arabic and Mediæval surgeons employed, he gave a short history of the introduction of the ligature of arteries, and spoke of it as—with the occasional exception of torsion for the smallest arteries—the hæmostatic means almost universally employed in chirurgical practice at the present day. But he thought that surgery must advance forward a step further than the ligature of arteries, particularly if surgeons expected—as seemed to be their unanimous desire—to close their operative wounds by the immediate union or primary adhesion of their sides or walls.

To enforce this point, Dr. Simpson recapitulated the arguments which he has already adduced on the same topic in this journal, (See *Edinburgh Medical Journal* for December, 1858, p. 547,) urging, that since we now know that in obstetric surgery we can, with metallic sutures, produce with great frequency and certainty, complete union by the first intention of the vivified lips of a vesico-vaginal fistula, (and that, too, in despite of urine, the most irritating fluid in the body, constantly bathing one side of the wound), surgeons ought to heal *their* common surgical wounds by primary adhesion also, provided there were no counteracting circumstances to prevent this desirable result, yet the complete and entire union by the first intention of surgical wounds, left by the removal of a limb, mamma, tumor, etc., was confessedly not very frequently seen in

surgical practice. The *ligatures*, by their presence around the cut arteries of the wound, formed the counteracting circumstances or agents, which prevented the primary union of the sides of the wound. They produced this effect in two ways: First, they acted themselves as foreign bodies in the depths of a wound; and when composed of silk or organic matter, they rapidly swelled with imbibed animal fluids, which soon decomposed, and thus rendered each ligature thread liable to act like an irritating seton. Secondly, they counteracted immediate union or primary inflammatory adhesion in another way, viz., they always set up in the ligatured points and ends of the tied arteries *higher* stages of inflammation than the adhesive—stages that were indeed destructive of adhesion; for every ligatured artery, at the point of deligation, has its two inner coats mechanically torn and divided by the ligature, and before it escapes from its hold on the arterial tube the ligature requires to eat through the remaining bruised and strangled coat by the processes of ulceration, of suppuration, and of gangrene. Under such circumstances, complete healing of the wound by immediate union, by primary adhesion, or by simple adhesive inflammation, is more than can be expected. Surgeons have made various efforts to overcome the two difficulties thus connected with arterial ligatures. (1) In olden times they were in the habit of including portions of the surrounding tissues in the loop of the ligature. But the process of ulceration, etc., by which each ligature cuts through the part it embraces, was thus found to be rendered unnecessarily severe and protracted. Hence arose (2) the rule of including within the ligature nothing but the arterial tube itself. After this important reform was introduced, the arterial tubes were by many surgeons tied (3) by large and sometimes flattish ligatures. These, however, cut and ulcerated through the included artery very slowly; and in practice they were betimes entirely replaced by (4) ligatures as small and slender as was compatible with due strength. To diminish the bulk of the foreign body, as ligature, in the wound, the practice was next adopted of (5) cutting off one end or limb of the ligature, after the knot was tied, others, with the vain hope that the mere loop of a silk ligature might remain buried permanently—though a foreign body—within the depths of the wound, proposed (6) that both ends of the ligature should be cut off; a practice followed with little or no success. The chances of union of wounds by the first intention have been attempted to be advanced by changing also the constituent materials of the ligature. Instead of vegetable threads of flax or hemp, (7) animal ligatures of cat-gut, silk-gut, buckskin, fibres of the sinew of the deer, etc., have been employed, under the expectation that they would prove less irritating to the wound, as approaching more nearly to the living animal tissues. (8) Lastly, ligatures of metallic thread have also been placed around bleeding arteries with the same hope; and, though not irritating, as far as the material of which they are composed is concerned, yet Dr. S. had found, that metallic, like any other form of ligatures which is

placed around bleeding arteries, and left there to ulcerate through the constricted tube, usually excited, in the course of their ulcerative progress, too high irritation and inflammation to allow of union of surgical wounds by the first intention.

All the march of modern surgery has thus been in the direction of attempting to increase the chances of the union of surgical wounds by the first intention, by diminishing more and more the irritation derived from the presence and action of the ligatures supposed to be inevitably required for the arrestment of hemorrhage. By the new hæmostatic process of acupressure, Dr. Simpson hopes to overcome, in a great degree, all those difficulties; as by it he expected to arrest the hemorrhage attendant upon surgical wounds, without leaving permanently any foreign body whatever in the wound itself. It was an attempt to bring bleeding wounds, in common surgery to the condition of wounds in plastic surgery, where no arterial ligatures were used, and where union by the first intention was in consequence the rule, and not the exception to it. Sewing up the outer or external lips of a large surgical wound, by silver, iron, or other metallic or non-irritating sutures, and yet leaving within the depths of the wound a series of silk ligatures, each producing ulceration, suppuration, and gangrene at the tied arterial points, was, he argued, but an illustration of a very paradoxical state of matters—like enforcing cleanliness and the best hygienic measures, as it were, outside a house, whilst within doors there were retained and locked up filth and decomposition, and the elements of destruction and disease.

Dr. Simpson stated that he had tested with perfect success the effects of acupressure as a means of effectually closing arteries and staunching hemorrhage first upon the lower animals, and lately in two or three operations on the human subject. The instruments which he proposed should be used for the purpose, were very sharp-pointed, slender needles or pins, of passive or non-oxydizable iron, headed with wax or glass, and in other respects also like the hare-lip needles, commonly used by surgeons at the present day, but longer when circumstances required it. They might be coated with silver or zinc on the surface, if such protection were deemed requisite.

At first, Dr. Simpson believed that in using acupressure as a hæmostatic means, it would be necessary to compress the tube of the bleeding artery between two needles, one placed on either side of it. But in his later experiments upon the living as well as the dead body, (as in amputations on the latter and subsequently injecting tepid water through the arteries, in imitation of the flow of blood,) he had found that the compression of one needle was usually perfectly sufficient to shut up an artery, and that even sometimes when two or more bleeding points were near, they could be closed simultaneously by the action of one needle or pin.

The whole process consists in passing the needle *twice* through the substance of the wound, so as to compress together and close, by the middle portion of the needle, the tube of the bleeding artery a line or two, or more, on the cardiac side of the bleeding point. The only part of the needle which is left exposed on the fresh surface of

the wound is the small middle portion of it which passes over and compresses the arterial tube, and the whole needle is withdrawn on the second or third day, or as soon as the artery is supposed to be adequately closed, thus leaving *nothing* whatever in the shape of a foreign body within the wound, or in the tissues composing its sides or flaps. To produce adequate closing pressure upon any arterial tube which it is desired to constrict, the needle must be passed over it so as to compress the tube with sufficient power and force against some resisting body. Such a resisting body will be most frequently found—1st, in the cutaneous walls and component tissues of the wound; 2d, sometimes in a neighboring bone, or other resistent point against which the artery may be pinned and compressed by the acupressure needle; and, 3d, in a few rare cases it may possibly be found in practice, that a second needle may require to be introduced to serve as a point against which the desired compression is to be made. Most commonly the first of these three plans seems perfectly sufficient, and that even in amputation of the thigh, a thicker or deeper flap merely requiring a proportionally longer needle. In acting upon this mode, the surgeon may place the tip of the forefinger of his left hand upon the bleeding mouth of the artery which he intends to compress andc lose; holding the needle in his right hand, he passes it through the *cutaneous* surface of the flap, and pushes it inward till its point projects out to the extent of a few lines on the raw surface of the wound, a little to the right of, and anterior to his finger tip; he then, by the action of his right hand upon the head of the needle, turns and directs its sharp extremity so that it makes a bridge, as it were, *across* the site of the tube of the bleeding artery, immediately in front of the point of the finger, with which he is shutting up its orifice; he next, either with this same forefinger of the left hand, or with the side of the extremity of the needle itself, compresses the locality of the bleeding arterial orifice and tube, and then pushes on the needle with his right hand, so as to make it *re-enter* the surface of the wound a little to the left side of the artery; and, lastly, by pressing the needle further on in this direction, its point re emerges through the *cutaneous* surface of the flap—the site of the tube of the bleeding artery being in this way left pinned down in a compressed state by the arc or bridge of steel that is passed over it.

'The needle thus passes first from and through the skin of the flap *inward* to the raw surface of the wound, and after bridging over the site of the artery, it passes, secondly, from the raw surface of the wound *outward* again, to and through the skin. Sometimes the needle will be best passed by the aid of the eye alone, and without guiding its course by the finger tip applied to the bleeding orifice. It compresses not the arterial tube alone, but the structures also placed over and around the site of the tube. When the needle is completely adjusted, all of it that is seen, and that not necessarily so, on the surface of the raw wound, is the small portion of it passing over the site of the artery; while, externally, upon the cutaneous surface of the flap, we have remaining exposed more or less

of its two extremities—namely, its point and its head. The rest of it is hidden in the structures of the flap, or side of the wound. The degree of pressure required to close effectually the tube of an artery is certainly much less than medical practitioners generally imagine; but in the above proceeding the amount of pressure can be regulated and increased, when required, by the acuteness of the angle at which the needle is introduced and again passed out—the cutaneous and other structures of the flap serving as the resisting medium at which the needle compresses the arterial tube. If it were ever, perchance, necessary to produce greater compression than can be thus accomplished by the needle alone, this increased pressure cou'd be readily obtained by throwing around the two extremities of the needle, which are exposed cutaneously, a figure of eight ligature, as in hare-lip, with or without a small compress placed between the arc of the ligature and the skin. In practice, however, the pressure of the needle upon the artery will, without any such external aid, be found to err more frequently, at first, in the way of excess than in the way of defect.

The process of the adjustment of the needle is difficult to describe shortly by words, but the whole of it is readily seen and imitated when repeated upon a piece of cloth or soft leather. We fasten the stalk of a flower in the lapelle of our coat by a pin, passed exactly in this manner; to compress a bleeding artery against a bone is somewhat more complicated, but not much so. In accomplishing it, we have to introduce from the cutaneous surface a long needle through the flap of the wound, obliquely, to near the site of the artery, and then compressing against the bone, with the fingers of the other hand, or with the end of the needle itself, the part containing the artery, we make the needle, after passing over this compressed part, and after testing whether it has closed the vessel or not, enter into the tissues beyond, and, if necessary, even emerge from the cutaneous surface on the other side, at an angle somewhat oblique to that at which it entered; thus taking advantage of the resiliency and resistance of the soft textures, to make them push the needle with the necessary degree of force against the artery and bone. Arteries in particular parts require special adjustments and modifications to compress them against the neighboring bone, which only anatomy and experience can point out. There is always sufficient soft tissue on either side of the artery for the needle to get a purchase upon, to compress the arterial tube against the bone, or other resistent point; and a comparatively slight purchase of this kind is generally all that is required. In two cases Dr. S. had found that branch of the internal mammary artery which so frequently bleeds in the bottom of the wound after excision of the mamma, easily and perfectly closed by a needle passed through the flap to near the artery, then lifted over it and (after compressing it so as to stop the flow of blood) pushed onward into the tissues beyond. Possibly in some amputations, an acupressure needle or needles, may yet be passed, immediately before the operation, half an inch or so above

the proposed line of amputation, so as to shut the principal artery or arteries, and render the operation comparatively bloodless. If so, these needles would serve at one and the same time, the present uses of both the tourinquet and arterial ligatures. Perhaps this will be found, in some cases, as simple and effectual means of compressing and closing arterial trunks for hemorrhage and other practical purposes; as, for example, the artery leading to an aneurism—as the femoral artery in popliteal aneurism—changing the operation for that disease into a simple process of acupressure, instead of a process of delicate dissection and deligation, when in any case the milder methods of compression, manipulation, and continuous flexion of the knee fail. It has been hitherto a difficult problem to obstruct the vessels of the ovarian ligament in ovariotomy, without leaving a foreign body, whether clamp or ligature, upon the stalk of the tumor, to ulcerate and slough through it. If the stalk be transfixed, and properly and strongly pinned in its whole breadth, to the interior of the relaxed abdominal walls, by one or more acupressure needles passed through these abdominal walls from without, this difficulty may possibly be overcome.

That needles used for the purpose of acupressure, and passed freely through the walls and flaps of wounds, will not be attended by any great degree of disturbance or irritation, is rendered in the highest degree probable, by all that we know of the tolerance of living animal tissues to the contact of metallic bodies. Long ago, John Hunter pointed out that small shot, needles, pins, etc., when passed into, and embedded in the living body, seldom or never produced any inflammatory action, or none at least beyond the stage of adhesive inflammation, even when lodged for years. Sometime ago, when the subject of acupuncture specially attracted the attention of medical men, Cloquet, Pelletan, Pouillet, and others, showed that the passage and retention of long acupuncture needles was attended with little or no irritation in the implicated living tissues. The reviewer of their works and experiments in the *Edinburgh Medical Journal*, for 1827, observes: "It is a remarkable circumstance that the acupuncture needles never cause inflammation in their neighborhood. If they are rudely handled or ruffled by the clothes of the patients, they may produce a little irritation; but if they are properly secured and protected, they may be left in the body for an indefinite length of time, without causing any of the effects which usually arise on account of the presence of foreign bodies. In one of M. Cloquet's patients, they were left in the temples for eighteen days; and in cases in which needles have been swallowed, they have remained without causing inflammation for a much longer period. It appears probable, from the facts collected on the subject, that metallic bodies of every kind may remain imbedded in the animal tissues without being productive of injury." (Page 197.) All the late observations and experiments upon metallic sutures are confirmatory of the same great pathological law of the tolerance of the living tissues for the contact of metalic bodies imbedded within their substance. In the operation for hare-lip, where the whole suc-

cess or failure of the operation depends upon the establishment or not of the union by the first intention, surgeons use needles to keep the lips of the wound approximated, often compressing these needles strongly with their figure-of-eight ligatures, and find this measure the most successful means which they can adopt for accomplishing primary adhesion.

The acupressure of arteries, when compared with a ligature of them, appears, as a means of arresting hæmorrhage, to present various important advantages:

1st. Acupressure will be found more easy, simple and expeditious in its application, than the ligature.

2d. The needles in acupressure can scarcely be considered as foreign irritating bodies in the wound, and may always be entirely removed in two or three days, or as soon as the artery is considered closed; whilst the ligatures are true foreign irritating bodies, and cannot be removed till they have ulcerated through the tied vessels

3d. The ligature inevitably produces ulceration, suppuration, and gangrene at each arterial point at which it is applied; whilst the closure of arterial tubes by acupressure is not attended by any such severe and morbid consequences.

4th. The chances, therefore, of the union of wounds by the first intention should be much greater under the arrestment of surgical hæmorrhage by acupressure than by the ligature.

5th. Phlebitis, Pyæmia, etc., or in other words, traumatic or surgical fever, seem not unfrequently to be excited by the unhealthy local suppurations and limited sloughings which are liable to be set up in wounds by the presence and irritation of the ligatures.

6th. Such dangerous and fatal complications are less likely to be excited by the employment of acupressure, seeing the presence of a metallic needle has no such tendency to create local suppurations and sloughs in the wound, such as occur in the seats of arterial ligature.

And 7th. Hence, under the use of acupressure, we are entitled to expect both, *first*, that surgical wounds will heal more kindly, and close more speedily; and *secondly*, that surgical operations and injuries will be less frequently attended, than at present, by the disastrous effects and perils of surgical fever."

Lectures on Diphtherite in the College of Physicians and Surgeons of New York—By Prof. Alonzo Clark.

Condensed from Phonographic Reports for the Medical and Surgical Reporter.

(We omit for this week the discussion of this subject in the Academy of Medicine; it was taken up at a late hour of the meeting, and no new facts were elicited. As this disease, however, from its prevalence in this city and various parts, is still attracting the atten-

tion of the profession to a great extent, we think that we can do no better than to give the substance of two lectures, delivered a few days ago, by Prof. Clark, on the disease, which, furnishing the views of that eminent pathologist in a connected and instructive form, will, undoubtedly, be as interesting to your readers, as the report of an extempore discussion.— GOTHAM.)

Having finished the consideration of croup, Dr. Clark took up diphtheria, as follows:

We now pass to a kindred affection, which at present is exciting much discussion among the physicians of this city and elsewhere; I refer to diphtheria or diphtherite. Brettonneau gave to it the name "*diphtherite,*" when his first memoir was published, many years ago, and by that name it has been known ever since. The older name seems to have been *malignant sore throat, or malignant angina, or membranous angina;* but the point most necessary for you to settle, is the one which is much discussed now-a-days, viz: Is this a new affection, or has it existed from the time we have any history of medicine? It does not seem to me, from what I have seen of it, and from what I have read of the diseases of old times, to be a new disease. It seems to have been known for a very long time. It is claimed by Brettonneau (who is the best authority we have on the subject,) that it is the disease known to the Greeks as the Egyptian disease, and that it never appeared in Greece until brought there by a colony of Egyptians. This he infers mainly from the description of what he supposes to be the same disease by a cotemporary of Galen, a Roman physician, and he maintains that this physician has described the disease in one page; he also asserts that it has been recognized from time to time all the way down to our day; that it swept through Italy and Spain, producing very great mortality in the early portion of the seventeenth century, and from that time until now it has appeared occasionally as an epidemic. The researches of such a man as Brettonneau are certainly worthy of consideration. One statement he makes, which is sufficiently curious, is, that that the Egyptian ointment, a substanse used by the Greeks for the relief of this affection, has been lost for a considerable period, and finally received in these latter times as one of the most effectual things to break up the membrane; it is made of one of the salts of copper, and he asserts that its preparation is to be found in the French codex, and other French books relating to pharmacy. We do not have it in our books. It is claimed, also, that the great epidemic which occurred in New York, and described by Dr. Samuel Bard, was this very affection. There are, I suppose, very few physicians, who have arrived at the middle period of life, who have not, at some time or other, seen this disease. But it has not fixed their attention as a *distinct form* of disease, and has been included under the general head of croup; and I suppose it is even now confounded with this latter disease. It has been known, in all probability, by various names; croup is a peculiarly favored term, and has covered a great many cases; malignant sore throat has covered a great many more. Another question arises, and that is,

is it in any way, allied to scarlet fever? Scarlet fever has a sore throat, a malignant sore throat, a membranous sore throat, which is frequently enough fatal by the formation of membrane, extending itself into the larynx and trachea. Is it not this form of scarlet fever? I had no occasion to ask that question after I had seen three or four cases of the disease. We know that persons who have had this diphtheritic inflammation, will have scarlet fever afterwards; again, children who have had scarlet fever will have diphtheria. *One* then does not protect against the *other*. Again, if it were a form of scarlet fever, we should expect to find it prevailing side by side with scarlet fever. Such is not generally the case, although, it is true, we have at this time an unusually large number of deaths from scarlet fever, while we have at the same time more of this diphtheria than I have ever seen before. It is not prevailing as a very dangerous epidemic, still there are many cases. I see, perhaps, a new case every week. Another interesting question arises. How is it communicated? Is it contagious? There is no question more difficult to answer than *that*, especially in regard to an epidemic disease, until it has been observed under a great variety of circumstances. That this diphtheria, or malignant sore throat is epidemic in its *tendency*, I think there can be no doubt; whether it is contagious or not is somewhat difficult to determine, because, where, in a certain house or family, one child shall be affected with the disease, and then a second, and then, a few days afterwards, a third, the difficulty is, that they are all subject to the *same* hygenic and dietetic regulations and conditions; they are all exposed to the same influences, which affect them all in the same manner. This is one illustration of the difficulty we meet with in attempting to ascertain whether an epidemic disease is contagious or not. In cities it is not very easy to follow contagion. In the paper of the *Sydenham Society* there is strong evidence that this disease can be communicated from person to person, and this evidence is derived from cases which have been observed in the *country;* for it does not seem to be spread by atmospheric influences. Brettonneau goes so far as to say that it can be communicated in no other way than from person to person, being in this respect similar to syphilis; and in the formation of a new nosology, this disease will have to stand side by side with the Egyptian disease, syphilis, the Neapolitan disease, etc. In this connection he relates some cases that are certainly very curious. This diphtheritic tendency is exhibited in other parts of the body than that of the throat. He relates one case in which a child, running about with bare feet, trod in the expectoration of a child sick with the disease, and asserts that the foot became the seat of diphtheritic inflammation, and he goes on to cite numerous instances to prove that the application of the expectorated material to an abraded surface will produce the disease, in other words, that the disease is susceptible of innoculation. This statement, however, is not to be taken in all its length and breadth, even though Brettonnau, himself, has made it.

Now, with reference to the *nature* of the disease. It consists in

an inflammation, the characteristic of which is the production of a thick, leathery membrane upon all the parts affected by it. Unlike croup, it does not confine itself to the breathing tubes, but the membrane passes over into the pharynx, passes upwards into the nose filling the nasal passages, and, unlike croup, if there has been an injury, or an abrasion of the tongue or cheek, patches of membrane will form thereon, at the seat of the injury. By European observers, it has also not unfrequently been seen upon parts where the epidermis has been removed by a blister, which extending in various directions, often becomes a very formidable disease. The fatality of this disease does not alone consist in an obstruction to the tubes which are the seat of the deposit; there is a *constitutional* element in it Unlike croup, it is what physicians are in the habit of calling a *blood disease.* I do not know whether the blood is contaminated or not; but it certainly appears to be a disease of the *whole* system, for in many instances, where the membrane is entirely removed from the air passages, the child, though apparently beginning to get well, will suddenly sink and die. In many instances this disease comes on with violent chills. In one case, I remember that a young lady was seizeed with these chills while in church; they became so violent that she was obliged to go home, and shortly afterwards had sore throat. In this respect it has some resemblance to the epidemic erysipelas. The *fever* attending the disease is often very high, and in some cases we have *vomiting* at the very onset of the disease. This is not the mode, however, in which they all come on. A great many cases come on very insidiously after the manner of some cases of croup, and often much more slowly than croup. I saw a physician attacked by the disease, who evidently had contracted it while driving about among his patients. He was seized first with a cold chill, which was soon followed by a flushed face, then another chill, then another fever, and then a third chill with a recurrence of the fever. On seeing him I asked, "what is the matter?" "I really don't know," said he, in a thick, husky voice, indicating some enlargement of the tonsils and this led me to examine his throat, and there I saw a patch of this exudation, about as large as a new penny, nearly circular and surrounded by an ugly looking dark line, the nature of which could not be mistaken. He very soon got well. Do not understand me now as describing the *general* mode of the invasion of the disease, I merely select these cases for the sake of illustrating the *various* and peculiar modes in which it makes its attack.

I was describing to you yesterday the mode of invasion of diphtheria. I gave you a particular mode of invasion for the purpose of illustrating the important fact that the disease is not a *local* one in its character. For although the disease has a local manifestation, yet it appears only in certain conditions of the system. How it first affects the system we cannot say. Were it proven that the disease can be communicated by inoculation, we should say the contamination affects the *whole system first;* and afterwards produces its

local manifestation at the point where the inoculation took place, in the same manner as syphilitic disease. Now with regard to the *symptoms* of the disease more particularly, I have seen about twenty cases of this disease, and I suppose in these twenty, so far as I can judge from the accounts of the disease, as it occurred elsewhere, I have seen about all the modes of invasion peculiar to this affection. They may be divided under two heads. Those in which the *constitutional symptoms* are active in the beginning, and those in which the disease makes its invasion *very insidiously*, and only becomes manifest by the appearance of a patch of exudation upon one or other of the tonsils or in the fauces. In this latter class of cases the children do not complain of much ill health, yet it is apparent that they do not feel exactly well, and have, as a rule, not much disposition to play.

In some cases you find the patient in bed, amusing itself with its playthings, and the mother being afraid that something was about to happen, has sent for the doctor. When you speak to the child, it answers you in a confident, full voice, perhaps a little hoarse. You will learn from the mother that the little one has had some cough. On examining the throat on the *outside*, you find it a little swollen; the *glands* on the outside are a little swollen. You get a spoon, depress the tongue, and looking into the fauces you will very likely see a little patch of membranous exudation, about as big as a dime, a whitish membrane lying upon one of the tonsils surrounded by a lively injection, sometimes surrounded by a pretty deep *venous* injection, or at least a venous color. *Then you have the diagnosis.* If this patch of the peculiar membrane of this disease remains, there is danger that it will gradually spread and produce very serious consequences. I saw a child just in this condition about two weeks ago. You would hardly have supposed that there was any need of apprehending danger. The pulse was not very rapid, perhaps about 100, the countenance fresh, the child only appearing a little paler than usual. The tongue was not particularly covered with any coating, nor yet dry. While the attending physician and myself were talking over the case in an adjoining room, I noticed the child tipping over its head, to look and see who those people in the parlor were. I state this little circumstance to show you that the child evidently did not feel very sick. We examined the throat and found one of these patches on one of the tonsils, and extending over the uvula; both tonsils were swollen and red. Almost any one would have said this child will get well, there is nothing to be alarmed about—but the doctor was alarmed; he told the parents that he feared the child would not recover. The voice was not very much altered, there was just enough of hoarseness to show that the inflammatory action was passing down into the trachea, although there was no membrane in the larynx as yet; but from the tendency of this thing to *advance* it seemed to me that it would push its way into the trachea and larynx, and destroy the child. I never saw the child again. Eight days afterwards, however, I saw its name in the newspaper in the catalogue of deaths.

I have not seen the doctor, and do not know how the child died; I suppose in the usual way, from extension of the membrane.

That the disease is a *constitutional* one, I think you will see from such a case as the following: The case is that of a girl, eight years of age, who while in apparent good health, was attacked on the 3d of January with what appeared to be an ordinary sore throat. Yet there was enough change in the general appearance of the patient, to induce the parents to call in a physician. The physician discovered upon one of the tonsils a portion of this membrane; he combatted the disease as well as he could by local applications and general remedies. In six days the membrane had entirely disappeared, leaving the tonsils still swollen and red. On that day, however, this little one began to have *vomiting*, and in short the peculiar form of ill health, that indicates the approach of *scarlet fever*. The scarlet fever ran its course regularly The tonsils in the meanwhile, although very much swollen and disposed to ulcerate, *were not at any time the seat of membranous exudation*, they were *entirely free from membrane during the whole course of the scarlet fever*. When scarcely convalescent from scarlet fever, it was seized with *catarrhal* symptoms such as usually precede the eruption of *measles*, and in a couple of days it had the measles eruption all over the upper part of the body. On Friday of last week, the eruption of measles had entirely disappeared from the body, and now the throat began to be sore again, and on Saturday morning the *membrane* once more made its appearance; this must have been some eighteen days from the beginning of the disease. This membrane has resisted all applications that have been made to it, it is now extending forwards into the fauces, and backwards into the œsophagus, and apparently downwards into the breathing tubes. The child will in all probability die. On looking over this case we cannot fail being impressed with the idea that there is a *constitutional element* in this disease. Here we see the disease, as it were, jumping over two of the most formidable affections of childhood, the *constitutional element* still remaining, and as soon as these two diseases had passed away, this *constitutional* disease, diphtheria, again made its appearance in its own peculiar form, producing its own peculiar results. These cases taken together will suffice to show you the mode in which this disease makes its invasion.

Now, a word or two with regard to the *character* of the *membrane*. I have had several opportunities to examine this membrane; here are some specimens coughed up by a young person, some 14 years of age. This membrane you will observe, differs somewhat from that formed in ordinary croup. The membrane of croup is not usually formed so *thick* as that, neither does it possess that coraceous or leathery character. Both membranes are formed in about the same way, and although the constitution of the two is not exactly similar, still there is nothing in the diphtheritic membrane, that will enable you to positively determine its character under the microscope. These membranes are formed in the same manner as are all false membranes, namely, by a coagulation of the plastic portion of

the blood forming threads or filaments, without the intervention of cells. It is a fibrillation of fibrine. In this respect it does not differ from the membranes formed during the progress of what are called *healthy* inflammations, such as pleurisy, pericarditis, etc, with this exception, in *this* tissue there is a variable quantity of *granules;* but no *cells*, belong to it properly. If there are any cells, they have come from the membrane on which it has been formed. These granules have in some parts of the membrane a *linear* course, in still certain other parts the granules seem to have no definite arrangement, but are held together by a certain matrix, thus forming a strong membrane. Some of these granules under the microscope appear to be *fatty;* sometimes the granules are definitely arranged in fibres; at other times there are no fibres at all, the granules being all mixed up together. The same membrane will frequently enough show these two characteristics as distinctly as would two different specimens. The difference between this membrane and that of croup, consists in the firm coraceous character of the former, and its more certain constitution by fibres, its greater abundance of granules and in the absence of *formative cells* to be converted into fibre. The membrane of diphtheria is properly speaking, formed by the fibrillation of fibrine, whereas that of croup is formed first by the production of cells, and the subsequent transformation of these cells into fibres. In the diphtheritic membrane, that transformation process is not observed. The fibres are formed directly in the beginning, out of the exudation. The attachment of this membrane to the parts on which it is produced, is very much like that of ordinary croup, it is perhaps a little firmer, its tissue being firmer. The disposition of this membrane to *reform* is very remarkable, and is perhaps, one of the most prominent characteristics of this tissue. The membrane of croup is sometimes renewed, but not so often as is the diphtheritic membrane. This membrane like that of croup is prone to extend itself down the trachea, even to the last division of the bronchial tubes. Sometimes it takes its course down the pharynx and the œsophagus into the stomach. There is still another form of this disease, demominated by European writers as "cutaneous diphtheria," which forms upon any abraded surface, more especially that produced by a blister, which is recognized by the occurrence of this same coraceous membrane upon the naked surface. From the point affected. an ugly inflammation extends itself in various directions, and if there is a scratch, wound, or ulcer, in the neighborhood, it is likely to become covered with the exudation; although it is not likely, when this "cutaneous diphtheria occurs, that you will find a membrane in the throat; hence cutaneous diphtheria is described separately from the *mucous* diphtheria. In some cases of mucous diphtheria, the membrane is formed in the vagina. I am not aware that it has been found in the rectum, although I see no reason why it should not occur there; at least I cannot call any case to my mind where it has been found. The most *dangerous* locality for the formation of this membrane, is certainly the *throat*. It is generally regarded as *least* dangerous when it occurs on the *skin*, it

being, when it forms here, far more ameniable to treatment, though not unfrequently fatal through constitutional influences. If the membrane, when forming in the *throat*, does not invade the *larynx* the chances for recovery are far greater; unfortunately the larynx is very rarely spared, and the patient dies with symptoms of suffocation, resembling those of croup. A certain portion of the children affected with this disease, do not have any membranous formation in the trachea; *these* are the *hopeful cases*, although it is true that the *tendency* of the disease lingers sometimes even after the membranes have disappeared. Dr. Macready, had such a case some time ago. In this instance after some days of treatment, the coraceous membrane was discharged, after which the child seemed to be doing very well indeed; all the membrane had disappeared from the throat, and there was no symptoms of its reformation: there was nothing to induce the conviction that there would be any obstruction of the passages, the breathing being easy and natural, the throat clear of all membranous material. The child was then somewhat weak, but still strong enough to take a ride out. One day, however, it sank suddenly into a state of collapse, without any known cause, and shortly afterwards died. I had just such a case as this myself, where after the membrane was discharged, the patient seemed to be doing remarkably well; he was well enough to sit up in his chair, although too weak to go about. So far everything was promising; but suddenly, one day, he was seized with a fainting fit, the pulse became more and more rapid, and weak, his face became very pale, looking exactly as if some internal hemorrhage had taken place, and in this condition he died. You will notice then that this disease has a sequel. There is a constitutional element in it, that does not alone manifest itself in the throat. Nor can we regard it as a trifling affection. It is true that it is not so fatal as membranous croup, because there are a considerable number of cases in which the membrane does not extend itself down into the breathing tubes.

(The doctor then took up the treatment in detail. As it would encroach too much on our allotted space, we give merely the conclusions, deducible from his remarks.)

1st. That inasmuch as diphtheria is a *manifestly constitutional* disease, so must our main reliance be placed on *constitutional treatment.*

2d. As the disease is of an *Asthenic* type, the remedies employed must be such as will give tone to the system. The best of these are the fluid preparations of iron, quinine, etc., together with an invigorating diet, and the occasional use of stimulants.

3d. The administration of mercury with a view of obtaining its *constitutional* effects, is a doubtful expedient, but the application of *dry calomel* to the ulcerations of the throat, is of decided benefit.

4th. The application of the nitrate of silver to the *membrane itself* is of no special service, whereas if applied to the parts immediately around the membrane, it tends to prevent its further extension.

5th. The administration of chlorate of potash, both in the form

of a gargle, and as an internal remedy, though not as was claimed a specific in this disease, is still of some benefit, and should therefore form a part of our treatment.

On a Case of Rupture of the Right Auricle of the Heart. By J. OREGEN, Esq., M. R. C. S. Eng., &c.

The following case occurred in my practice a short time since :—

On the evening of April 7th, I was hastily summoned to visit a man a very short distance from my residence, who was said to be in a fit. I immediately obeyed, and on my arrival found him stretched upon the floor, apparently dead. He was pulseless and insensible, and on placing my ear over the region of the heart, I faintly, but distinctly, heard it beat two or three times when it entirely ceased. As the cause of death to my mind was not sufficiently evident, I refused to grant a certificate, whereupon the friends desired that a post-mortem examination should be made.

The man, it would appear, met with an accident some two or three months previous, by the falling of a heavy piece of iron upon his head, which incapacitated him from following his avocation as a sail-maker for some days, and I was informed by the friends that he suffered more or less from the date of the injury to his death with headache, and occasionally very slight aberration of intellect ; and as he was in Government service, it was principally on account of that accident that the friends desired the post-mortem examination, as, in case of death resulting from the effects of that injury, the widow would be entitled to a pension.

Assisted by my friend, Mr. Cope, a surgeon residing in this town, I made the post-mortem examination. The body was that of a robust, healthy-looking man, apparently about thirty-eight years of age. There were no marks of violence; the features were placid and pale, but the region of the chest was quite livid, while the other parts of the body were of a natural hue. The scalp was first examined, but we could not discover the cicatrix of any old wound. We then proceeded to take off the calvaria. which was exceedingly thick, and examine for old fractures ; not that we expected to find any, but only to satisfy the friends, who positively stated his skull was fractured when he received the blow on the head. The membranes of the brain were all healthy, except at the summit, where they were adherent to the surface of the brain to the extent of about one inch and a half in diameter. The longitudinal sinus and meningeal arteries were quite empty. The brain itself was healthy, and on slicing it away was found quite exsanguineous. The ventricles were carefully examined separately, but nothing morbid could be discovered; and we could not detect anything in the head to account for death, even as a remote cause. We then proceeded to examine the chest, and on opening it our attention was first attraeted to an enormously distended pericardium, into which we made an incision,

and a very large quantity of blood escaped into the cavity of the chest in a semi-coagulated condition. The heart, with its opened pericardium, was then very carefully detached, and minutely examined. It was of ordinary size, flattened from before to behind. Its weight was not ascertained. The right auricle was first examined, and on carefully passing the little finger along the ascending cava a rent was discovered on the anterior aspect, situated between the entrance of the inferior vena cava and the right auriculo-ventricular opening, about six lines in length, and partly filled with a plug of fibrin. The walls of the right auricle were, if anything, a little thinner than natural; but the remainder of the heart was perfectly healthy and of usual thickness. There was no dilatation in its walls, neither was there any fatty degeneration, nor any aneurism communicating with the bag of the pericardium. The valves were all healthy. The several cavities were empty, with the exception of the left ventricle, which contained a small quantity of coagulated blood. The lungs were next examined: the right was adherent by old adhesions to the pleura, which could with difficulty be separated. The lung tissue on both sides was perfectly healthy. The abdomen was not examined, as the cause of death was sufficiently evident in the chest.

Remarks.—These rapidly fatal affections of the heart are fortunately, very rare; but when they do occur, we generally find the rupture to be attributable either to fatty degeneration or dilatation of its walls, neither of which could have been a cause in this case. Amongst the natural causes of ruptured heart (although exceedingly rare,) violent mental emotion is the chief, but which could not possibly have been present in the subject of this case, as he was sitting perfectly tranquil and quiet in his easy chair at the time of his death; and it was only a few minutes before that he told his wife he was then in a better state of health than he had been for some years past; and nothing occurred during the day or evening to give rise to any mental emotion. In November, 1843, a somewhat similar case was reported by Dr. Stroud to the Royal Medical and Chirurgical Society, and mentioned in Professor Taylor's work on "Medical Jurisprudence," which occurred in a young man aged twenty-nine, but which differs in this respect from the present, that it did not prove so rapidly fatal, as he lived about ten hours after his first seizure; while in this case, which occurred in my practice, the patient only survived about eight minutes after he was seized. In the case of Dr. Stroud, also, there did not appear to be any morbid condition of the heart. The chief points of interest in this case, therefore, are the absence of anything which could give rise to the rupture, and the very rapidly fatal results.—*London Lancet.*

Action of Alcohol upon the Economy.—According to the usually-received opinion, alcohol introduced into the circulation by absorption from the alimentary canal, becomes rapidly destroyed by combustion with the oxygen of respiration. Carbonic acid and water may be the immediate results; or, as is more generally admitted, the alcohol passes through a series of transformations, representing derivatives more and more oxygenated, as aldehyde, acetic acid. oxalic acid, and, finally, carbonic acid. The results of a series of experiments instituted by M. M. Duroy, Lallemand, and Perrin, point to different conclusions. According to these, alcohol is not destroyed in the blood, since it may be found in all the liquids and the tissues, while the products of combustion are not found there; and, moreover, it is eliminated by the various channels, as the lungs, the skin, and especially the kidneys. They conclude—1. That alcohol is not an alimentary substance, it acting only as a modifier of the nervous system. 2. It is neither destroyed nor transformed in the economy. 3. It becomes especially concentrated in the liver and in the brain. 4. These facts explain the production of certain organic and functional changes in the liver, brain and kidneys.—*Med. Times and Gazette*, November 26, 1859, from *Gaz. Med.*, No. 46.

Smoking the Exciting Cause of Cancer.—M. Bouisson has published a valuable article in the *Montpelier Medical*, wherein he endeavors to prove that smoking is often a very active exciting cause of epithelial cancer about the tongue, lips, sides of the cheeks, or soft palate.

M. Bouisson has collected sixty-eight cases of cancer and cancroid of the lips, in which the habit of smoking was either carried to excess, or was very inveterate. He considers that such morbid products have more frequently been seen since the custom of smoking has become general; but concedes that, for the development of cancer, there must be the proper diathesis. The author maintains, however, that this tendency would often have remained latent without the local exciting cause to which we have alluded. He further states, in support of this opinion, that labial cancer mostly attacks the lower lip, where the cigar or pipe rests; and that such cancer is rare with women and children. One young lady is mentioned who suffered from the affection; but she used by stealth to smoke immoderately.

The more inveterate the habit, the more frequent the cancer, especially with those who smoke short pipes and strong tobacco. Cleanliness, long pipes, and mild tobacco, may keep off the complaint.

M. Bouisson operated upon a medical man of Barcelona, who, in the Spanish fashion, allowed the smoke of cigarettes to escape through the nose. The nostrils were filled with epithelial vegetations.

No doubt M. Bouisson's paper is extremely valuable; but it might be asked whether the disease in persons laboring under the diathesis would not have broken out elsewhere. It is, besides, well known that labial cancer has been found in patients who never smoked in their lives. That smoking *may* act as an exciting cause, is, however, both rational and in accordance with fact.—*London Lancet.*

Hysteric Tympanitis, or Phantom Tumor of large size.

A very remarkable example of hysteric tympanitis developed to a most unusual degree, has been for several years occasionally under notice at the Metropolitan Free Hospital. The subject of it is a girl, aged 19, unmarried, of peculiar physiognomy. Her countenance is expressive of intense morbid self-concernedness, the eyes downcast, and her aspect indicative of moral duplicity. She was originally under the care of Dr. Ramskill, and for some months was an in-patient, in order that her case might be thoroughly observed.

The following notes of her case as to her state were made on September 19, 1857.

"Her abdomen presents pretty exactly the appearance of a seven months' pregnancy, and her father even went to the length of turning her out of his house on the supposition that such was her condition. She applied to several medical men, and very different opinions were expressed. On admission, it was found that the abdomen, although round and full, was of clear percussion note in every part, that the umbilicus was depressed instead of protruding, and that no tumor could whatever be felt. On vaginal examination the uterus was found small, and its cervix of due length. Respecting the absence of any tumor in the abdomen, some caution must be exercised in giving an opinion, as she invariably holds the muscles so tense and board-like, that pressure cannot be made with any satisfactory results. At times the abdomen will appear to be larger on one side than on the other, and the external contour as a very large ovarian cyst is very exactly simulated, but then there always remains the clear percussion note, which is inconsistent with such a supposition."

The girl has since been in several other hospitals; and she states that at one she was strongly urged to submit to the operation of paracentecis. Latterly she has again been attending at the Metropolitan Free Hospital, under the care of Dr. Jones. The prominence of her abdomen is now such that any one, not having witnessed the trial of chloroform, might well be excused for entertaining the utmost skepticism as to the possibility of its disappearance. It exactly resembles that of a patient at the full period of pregnancy. The eye of a careful observer may, however, detect some differences between the girl's bearing, and that of a pregnant or dropsical

person. Her back is more arched, and her gait has less of the swinging motion from side to side—"waddling"—a difference no doubt due to the fact that she has no real weight to carry. About two weeks ago, in order again to make a thorough and satisfactory examination of the state of things, she was put under the full influence of chloroform."

"The abdomen rises evenly in all directions, and is most prominent about two inches below the level of the umbilicus. A brown streak extends from the umbilicus to the pubes. The area of clear tympanitic resonance extends over the whole front of the abdomen. The measurement over the most prominent part is thirty-three inches and one third. Posteriorly both loins are dull on superficial percussion, the left side being entirely dull, even on the deepest percussion, while on the right a forcible stroke elicits a decided degree of resonance. As unconsciousness was supervening, under the influence of chloroform, the abdomen at once flattened, until not the slightest appearance of tumor existed. It was soft in all parts, and the promontory of the sacrum could very easily be felt. No escape of flatus was noticed.

"The abdomen now measures only thirty-one and a half inches. Examined per vaginum the cervix uteri was found to be long, and in every way healthy; the uterus was freely movable. Feces are felt in the rectum, and a mass the size of a small egg, to the left side, about which some difference of opinion existed as to whether it was fæcal or otherwise. As the influence of chloroform was passing off, the abdomen quickly resumed its original state, and in a few minutes after, when she had regained consciousness, it was nearly as prominent as ever. She took the chloroform remarkably kindly, and recovered from its effect very quickly."

One of the interesting features in this case is its long continuance. All forms of anti-hysteric remedies have been exhausted upon it without the slightest result. Marriage is, indeed, in all probability, the only remedy which can be expected to influence a condition which partakes more of moral than of physical derangement. Several similar cases have recently been under our notice, in one of which the patient has been told by several surgeons that she is the subject of ovarian dropsy. In this instance, also, as in the above, the patient is unmarried, and the same peculiarities of aspect are exhibited as have been just described. The value of the exhibition of chloroform as a means of diagnosis can be scarcely overrated. The cases are those to which mistakes in diagnosis are of the utmost importance, since they would inevitably lead either to unfounded imputation on the patient's chastity, or to the belief in the existence of incurable disease, or to the attempted performance of most dangerous operations. The records of surgery contain the narratives of not a few of such, in which either paracentecis has been performed, or the still more fatal mistake committed of laying open the abdomen, in order to extirpate an ovarian cyst. Against such errors the exhibition of chloroform affords entire security, and when any doubt offers about a case, it ought never to be omitted. As insensi-

bility is induced, the board-like condition of the abdominal parietes, which had previously baffled all attempts to ascertain the exact state of the viscera, disappears, the diaphragm rises, the belly flattens out laterally, the anterior prominence disappears, and the hand can be passed back till it touches the sacral promontory.—*Med. Times and Gaz.*, Dec. 10, 1859.

Abstract of the Report of Dr. Wilson Jewell, on Meteorology and Epidemics for Philadelphia for the year 1859; read before the College of Physicians at its last monthly meeting, Feb. 1st.*

The mean temperature of 1859 was three-quarters of a degree below that of 1858, and about two-tenths of a degree above the average for the last eight years.

97° was the maximum temperature for the year, and 2° below zero was the minimum.

The warmest day was the 13th of July, while the coldest day was the 10th of January.

The winter and spring were about three degrees above the average temperature for the last eight years, while the summer and autumn were nearly two degrees below the average.

The amount of rain that fell during the year was 54¾ inches, which was ten inches more than the average for the last eight years. It was more than 13 inches greater than the quantity which fell in 1858.

The deaths in our city for 1859 amounted to 9,742. This number was less by 955, or 9 per cent., than those in 1858, and 12.19 per cent. below the average for the last four years.

Compared with the returns of deaths and their ratio to population in the following named cities, it will appear that our city presents a very high standard of salubrity; equal to, if not surpassing the most healthy city in the world.

	Population.	Mortality.	Ratio of deaths to population.	Deaths to each 1,000	Per ct. of deaths to population.
Providence,	52,000	982	1 in 52 09	19	1.83
Boston,	180,000	3,738	1 in 48.15	21	2.07
New York,	800,000	21,645	1 in 36.09	27	2.70
Philadelphia,	625,000	9,742	1 in 64	15	1.55
Baltimore,	253,000	5,039	1 in 50.02	20	2

The greatest inequality will be seen to exist between the death rate to population of our own city and that of our sister city, New York. These figures will furnish some idea of the healthiness of the two cities. Notwithstanding the disparity between the deaths in Philadelphia and those in New York when compared with the

* We are indebted to Dr. Jewell for this abstract, and for his promptness in acceding to our request for its early publication.

population of each city, the City Inspector of the latter city says in his last report that, *New York city, at this day, can lay claim to the privilege of being numbered with those of the most healthy in the world.* It is unnecessary to offer a single comment upon this very extraordinary statement, when the figures contradict so positively the assertion. Philadelphia shows a death rate of 1 in every 64 of the population, and New York 1 in 36.09!

It is to be regretted that the inspector did not avail himself of the above statistical information. The death pressure upon population in New York is nearly double that in Philadelphia.

The city of Providence, in a sanitary aspect, has been characterized as a model city, and yet a comparison of the figures in the above table shows, that the death rate in our own city was as 1 in 12 less than in Providence.

No epidemic has befallen our city, nor have the usual endemics prevailed to any extent during the year. In many instances, the diseases of the different seasons have been less frequent and more mild in their character.

During the fall and winter months, and in the early spring, croup and inflammation of the bronchia and lungs among children were the prevailing diseases. With croup, there was observed the steady increase in the number of fatal cases that I have alluded to in several former reports. In inflammation of the lungs the deaths did not reach the number recorded for 1858. There was nothing, however, unusual in any of the winter diseases beyond their usual characteristics.

Scarlet fever, which had prevailed to a great extent for several previous years, was still among us when the year opened. For the most part, the cases which occurred did not present a highly malignant type of fever, and yielded readily to a mild treatment. The deaths, however, were nearly equal to those of the former year, and amounted to two hundred and thirty-two.

I cannot omit to mention in this place the appearance of a few cases of diphtheria, or malignant or putrid sore throat. Towards the latter end of the year these cases increased in number. Several of them, I have understood, were fatal, but whether they were certified to and classed in the record with sore throat, scarlet fever or croup, I am unable to determine, as I find no death recorded from diphtheria. I did not witness a single malignant case of this fatal disease in my own practice, but in a number of cases of sore throat accompanied with high fever, vomiting, frequent pulse and red tongue, which came under my care, I observed a remarkable tendency to congestion of the mucous tissue of the fauces of a dark livid hue, and in a few instances to the exudation of a whitish plastic lymph tending to ulceration. These cases were accompanied with great debility of the system. They were evidently characteristic of the epidemic form of diphtheria, but in a mild type, as none proved fatal.

None of these cases were in any manner involved with scarlet fever,

and in one instance the patient had passed through that disease a few months previously thereto. Nor did any of them resemble croup.

How nearly this malignant form of disease, which has prevailed in several of our large cities and towns to an extent sufficient to create alarm, is identified with scarlet fever or with membranous croup, or whether it derives its origin from a distinct and peculiar poison, becomes an important question for solution. The indications are, that ere long we may have to combat with this formidable enemy, which, as yet, particularly in its malignant type, has defied, in a majority of instances, the most watchful and judicious treatment.

The invasion of cholera infantum took place about the usual period of the summer, and was most prevalent in July. Its ravages by death, however, were not so great, by 254, as during the previous year. The number of deaths recorded were 408, a lower mortality, compared with population, or deaths from all diseases, than has occurred for many years. The cause of this remarkable diminution in the deaths from this infantile epidemic may be ascribed, in part, to the favorable condition of the summer heat, which was two degrees below the average for the previous eight years—to the absence of a choleraic influence, and the increased facilities for hygienic protection afforded that class of the population, who are deprived of the advantages of a pure atmosphere in their ill-ventilated houses. Thus by cheap rides in easy and commodious city railroad cars, in almost every direction, they reach, within a few minutes, the rural environs of our city, and there, with their feeble, sickly and emaciated offspring, enjoy the luxury of inhaling the pure, cool and invigorating air of the country.

Of the entire number of deaths for the year, 5,157 were males, and 4,585 were females, an excess of 12 52 per cent.

Still-born children foot up 658 during the year. These, with deaths from casualties of various kinds, and from debility and old age, numbering in all 1,709, should be deducted from the total mortality, if we would ascertain the deaths from morbific causes. By this analysis, there will be found only 8,033 deaths, or one death in every 76.5 of the population, have been caused by diseases. This view will present the sanitary condition of our city in a still more favorable light.

Before the expiration of the first year of life 2,969 children perished, exclusive of still-born. Before the tenth year, there perished 5,005, or 51.37 per cent., more than one-half of the annual mortality.

This large proportion of waste of infant life in our city presents a sad picture of the prevalence of sanitary evils, and of mismanagement on the part of parents and others, who have the oversight of this interesting portion of our population.

The deaths under twenty years were 5,415, while those above that age were 4,327. This division gives 55.58 per cent. of the mortality to the children, or those under twenty—that period constituting the division line between adults and minors. In 1858, the

deaths in New York city of those under twenty were 67.70 of the whole number, an excess of 14.32 per cent. over our own city for the same year.

Consumption of the lungs furnished 1,505 deaths. This amount is 9 per cent. less than in 1858. Contrary to what is usually observed, the male deaths were in excess of the female 7.57 per cent.

The deaths from this disease were equal to 19 per cent. of the total mortality. To the population, they were as 1 to every 415.29, or as 2.40 in every 1,000.

The heaviest mortality from consumption, in any decade of life, was between that of twenty and thirty years.

Convulsion claims 520 deaths, and maintain an ascendancy over any other disease of infancy in swelling the bills of mortality.

The number of deaths from the various fevers amounted to 560. This limited amount exemplifies the healthy condition of our city, when placed in comparison with those of former years, and with the deaths from fevers in other large cities. The proportion to all causes, exclusive of still-born, was as one in every thirteen, or 7.16 per cent.

The deaths from scarlet fever give 232, nearly equal to those in 1858. The epidemic influence still lingers with us, and, according to the returns for the last quarter of the year, may be on the increase.

Of deaths from small-pox, but two occurred during the entire year, and none from varioloid.

I cannot refrain from expressing the conviction, judging from the evidence afforded by the statistics of former years, that, ere long, our city may suffer from an epidemic influence, which shall inflict upon us that most loathsome of all diseases, small-pox. Adopting this opinion, I regret to add, that we are by no means in a proper state of protection, as far as relates to prophylactic measures, to contend with this dangerous enemy to life—from the fact that for several years public vaccination has been fearfully neglected, through the supineness of our public authorities in declining to appoint collectors of cases for vaccination as in former years. As a consequence of this omission, only 195 persons were vaccinated under this ordinance during the year. No censure whatever can be laid upon the medical gentlemen, appointed by councils as vaccine physicians. Their duty is to vaccinate, gratuitously, all persons who call upon them at their offices, which duty they have faithfully performed. The imperfection exists in the want of collectors of cases, who shall make house to house visits in the several wards, and gather the names and residences of the hundreds of children, and even adults, who are unprotected by vaccination, and who, in the event of an epidemic of small-pox, may fall victims to its ravages. For the past six years, but few of those for whom this humane ordinance is intended have undergone the process of protection when compared with the many who received its benefit in previous years, under the ordinance recognizing collectors of vaccine cases. On more than one occasion, the board of health have called the atten-

tion of councils to the importance of an improved system of vaccination, but without any favorable response. The medical profession have spoken their minds freely on this subject, and, in the event of an epidemic of small-pox visiting our city, in its present unprotected state, as far as public vaccination is concerned, let the censure fall where it properly belongs.

Remarks on the Epidemic of Diphtherite, (or Hog-skin Angina.) Translated from the French, by O. D. PALMER, M.D., Zelinople, Pa.

Notwithstanding the positive opinions of some authors to the contrary, diphtherite is an affection still but little known. Whilst maintaining this position, it seems to me proper that those who have been called upon to observe it, should make known, not only what they have been able to see particular in the new epidemic, but also the comparative appreciation of the general facts, as they have been observed by themselves, or as they have been learned from others.

In the commencement of this epidemic, with my memory surcharged with the writings most recent and esteemed, and more especially with the original works of M. Bretonneau, I considered myself armed against it; all seeming to me simple and clear. The mode of propagation, contagion, progressive extension; the disease extending from the throat or nasal fossæ into the rest of the organism, at first wholly local, drawn to the exterior, and only affecting the whole system from the external to the internal parts; the therapeutic success, dependent on the energetic application of the wholly surgical means, that is, dependent on the hands of the physician—all was simple, and my only expectation was to have to follow the best models.

My hopes have been betrayed; the perfect image that I awaited has discovered itself in a very different shape, as will appear from the picture that I am about to trace.

I have seen an affection raging among different populations, attacking at the same time individuals having no communication with each other, without regard to other diseases with but few rare exceptions originating from an unknown influence, and seeming to choose its subjects indiscriminately. The disease begins like a severe eruptive fever, in the midst of a large retinue of general symptoms, with considerable tumefaction of the ganglions, even when the false membrane is hardly developed; commencing in the throat, to extend from one part to the nasal fossæ, and from another to the respiratory passages, and sometimes to the digestive apparatus; showing itself also in the auditory conduit, at the vulva, in the vagina, in cutaneous lesions; attacking various points of the organism, without relation to contiguity—the throat with the vulva, the throat with the bronchiæ, the larynx remaining sound; the throat, then the intestines. These coincidences, indicated by the symptoms, have not

been justified by the opening of bodies; but in two cases of tracheotomy, I have been able to demonstrate the absence of false membrane in the trachea, whilst it existed in the bronchia, or was in the state of being formed. In a good number of instances the adventitious membrane has been detached without treatment, or very little, and as quickly as when cauterizations daily or even more frequently have been practised. This is no hindrance to the re-formation of false membrane, in parts contiguous or remote, and these new attacks have taken place, both when the throat contained the pseudo-membrane adhering, and when this was completely free. That is to say, we have observed an infection, originating more from epidemic influence than from contagion, marching, in the manner of the exanthematous fevers, from the circumference to the centre, not always following the way of contiguity, in extending its characteristic products, little susceptible of being arrested in its progress by caustics, but sometimes yielding to the efforts of spontaneous reaction—an indication that we should endeavor to imitate, in furnishing the organism means of sustaining a frequently unequal contest.

All is linked together in the doctrine of M. Bretonneau. Generalizing the facts of incontestable contagion, he admits that in all circumstances the diphtheritic germ is deposited locally, as it is in syphilis. He forgets that with whatsoever part of the skin or mucous membrane the virus comes in contact, it is the throat, amygdalæ, and nasal fossæ, that produce, with some rare exceptions, the first vestiges of false membrane, belonging to this species of *angina*. It is different in this particular from syphilis, to which it assimilates, and which acts at first, and always, on the part where it is applied.

There is then, in all cases, and especially in serious cases of diphtherite, a diseased action internally succeeding to the contagion (when it is caused by this,) and subsequently producing a similar disease, as takes place in the eruptive diseases, variola, rubeola, and scarlatina, which likewise appear insidiously, and without our being obliged to refer their origin to contagion. May it not be the same in this pseudo-membranous angina? I have offered sufficiently numerous examples before, and have remarked elsewhere, "its contagion is *possible;* it is not at all *necessary.*"

From the full conviction of the development of this disease *internally*, to that of its destruction, at once, by cauterization, is but a step; this step has been taken, and numerous successes are furnished in support of the doctrine. They have been shown, doubtless, in severe cases, but much more often when the cure has either been wholly spontaneous, or effected by the mildest means. These successes have not been wanting to me, either, though I have confined my cauterization to the *isthmus of the throat.*

It is, then, by figures, that it will be necessary to resolve this important question, and its solution is required by science. Whilst awaiting, may we not be permitted to adduce the greater success in tracheotomy, since surgeons no longer *cauterize* the trachea after the operation, against the utility of such a practice in the larynx?

With my own experience, and after an attentive perusal of the known facts, I think we are not far from the truth in considering this primarily a general disease, inclined to manifest itself upon the mucous membrane in the same way that the eruptive fevers do upon the skin. Doubtless this view is less seductive, in a therapeutic point of view, than the preceding one; for were it established, we should be left unarmed against this, as we are against the eruptive fevers, all the phases of which we are obliged to submit to, without the beneficial interference of heroic means. But if this is the truth, we must accept it as it is.

Pathological anatomy, chemistry, the microscope, have not as yet afforded very great aid to the study of diphtherite. The first of these, in explaining the internal lesions caused by this disease, has only confirmed, in regard to the interior, what clinical observation had established, in the living, in the parts accessible to view. It has shown, also, the liquid state of the blood, the vascular congestions resulting from this state, and the mechanical asphyxia caused by the false membranes obstructing the air-passages. It has examined, perhaps too negligently, the lymphatic system, which appears to play the most important part in this disease.

Chemical analysis and the lens, in ascertaining the fibrinous nature of the false membrane, have still not been able to distingush it from the *pultaceous covering* that accompanies a pathological state very different from the pseudo-membranous angina.

The chemists and micrographers ought to give us correct examinations of the blood at different stages of the diphtherite. This would probably open the way to a knowledge of the morbid state that certainly precedes a primitive modification of this fluid, before it is essentially altered by the enormous amount of fibrin thrown upon the mucous membrane—a consecutive alteration, that explains so well the hemorrhages and congestions, the debility so great and so slow to disappear, and those paralyses which hamper convalescence. *Gaz. Hebdom.—Boston Med. and Surg. Journal.*

The Veddah Tribe in Ceylon.—In the report of the proceedings of the Ethnological Society of London, in the *Lancet*, is a remarkable account of this barbarous tribe, of which little is known. Two skulls of individuals of the tribe were exhibited. The crania were small and very narrow, giving the zygomatic arches an appearance of extreme lateral projection.

The only detailed notices of these Veddahs are to be met with in the travels of Captain R. Knox, published about 200 years back, in the account of Ceylon by Dr. John Davy, and the recent work by Sir Emmerson Tennent. These writers, and also Mr. Bailey and Mr. Bradford, from whom recent communications had been received bear testimony to the fact that the Veddahs are the aboriginies of the island, and that before the Christian era they retired before invaders from the banks of the Ganges to the jungles and hills in the south-east of Ceylon, where they have remained isolated for

more than 2,000 years. A custom which they have of never, if possible, coming into contact with other people, and of not showing themselves even when they engage in matters of barter with the travelling traders of the country, accounts for the maintenance of their isolation, and at the same time identifies them with the aboriginal inhabitants, as described by ancient writers. The Veddahs seen by Sir E. Tennent had flat noses, prognathous jaws, were of low stature, and very degraded in aspect. Mr. Bradford, however, speaks of one whom he met with as resembling very much a Cingalese coolie; and it may be remarked that they speak a dialect of the Cingalese language, though the more degraded are described as scarcely possessing an articulate tongue, and as communicating with one another by signals and guttural sounds. The Veddahs go about in nearly a nude state, their hair falling down to their middle in matted lumps. They live in the forests, and at night seek shelter under rocks or in caves, or on platforms raised amid the trees. They depend for they subsistence on the bow and arrow, using their feet as well as hands in drawing the bow. In their diet they are omnivourous, but consider lizards and roasted monkey as the greatest delicacy. Sir E. Tennent says that they have no knowledge of a God or future state; no temples, idols, prayers, or charms; in short, that they exhibit no instinct even of religion. Their only ceremony is a sort of devil-dance, by which they avert evil. They do not bury their dead, but only cover them with leaves in the jungle. They have no idea of time or distance; no names for hours, days or years, and in the matter of education, are unable to count beyond five on their fingers. They have no amusements, and not even the rudest kind of music. The writer last quoted says further, that they are of gentle disposition, and though knowing nothing of virtue, rarely commit great crimes. They exhibit in a striking degree the effect of complete isolation, either in degrading man to, or keeping him in, a state of abject barbarism.

Claude Bernard's Lecture Room in the College of France.—The Paris correspondent of the *Medical Times and Gazette* gives the following description of the lecture of this eminent teacher of physiology:

It is a large square room, capable of containing six hundred students. At one side of the room, on an elevated platform, is the Professor's chair, immediately in front of which is a table, some ten or twelve feet long, on which all the experiments conducted in public take place. From the front of this platform the seats for the students rise in tiers. The roof is ornamented with four frescoes, representing Hippocrates, Aristotle, Buffon, and Linnæus. Elegant as is the general appearance of the room, it has a serious defect. The light, being derived from the roof, falls directly on the table, and any delicate operation, requiring close inspection, forces the Professor to place his head in a position which effectually intercepts

the rays of light on their way to the object under examination. In an adjoining apartment is the laboratory, which consists of two small rooms. In that nearest the lecture room are some small furnaces, and sundry glass cases, containing the larger instruments required for the experiments. In the centre of this room is a strong, solid table, about five feet by three, perforated in sundry places, so as to permit cords to pass through it, to control the movements of the animals subject to vivisection. The other room resembles a chemist's shop. In it are kept all the chemical and medicinal agents, as well as the smaller instruments. In one corner is a sand-bath, intended for experiments on cold blooded animals. Beneath these apartments, and connected with them by a stone staircase, are a series of cellars, dark and dismal enough, in which are kept animals of every description—dogs, rabbits, guinea-pigs, etc., etc.—with here and there huge basons and troughs, filled with frogs and other cold-blooded animals—all intended in their turn to be sacrificed and offered up on the altar of science.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Practical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Heart. By AUSTIN FLINT, M. D., Prof. of Clinical Medicine in the New Orleans School of Medicine; Visiting Physician to the New Orleans Charity Hospital, etc., etc., etc. Philadelphia: Blanchard & Lea, 1859. pp. 473.

Here we have another *new* book—a monograph of some five hundred pages, on the Heart, its diseases, etc. Is it "a desideratum" to have a book of this character just now? Or was it needed at all at present? A great many say that we have an infliction, of late, on us of books. The multiplication of books can certainly do no harm. The time, however, expended on many of them—compilations, for example—is time unthankfully occupied. But on the other hand, would it be right to limit the number of books to the discoveries of the age—to the setting forth of nothing but new matter? If such were the case, the number of books would be few, and

the size small. A volume of a few hundred pages, issued annually, would be sufficient to contain all of the additions to every branch of medical science. The author before us tells us that he has accumulated notes of about two hundred cases of the various cardiac affections. Are we to infer that these cases constitute the basis of the work? If so, what do they add to existing knowledge by Hope, Bouillard, Walshe, Stokes, Audry, Forget, etc? Two hundred cases of cardiac disease might be met with, we will venture the remark, without encountering a single lesion not hitherto described. Perhaps, however, Dr. Flint's cases are more prolific than common.

A liberal share of the work is devoted to *Physical Signs.* The author is no doubt more at home here than in Pathology. He wrote a very clever paper for the American Medical Association, on the clinical study of the heart-sounds in health and disease, and possesses some notions on the subject that he regards as original. Those who know most of the value of improvements in diagnosis, will be disposed to excuse the author's rehash of old matter, on account of his pretensions to having brought forward something to assist in discrimination.

But while on heart-sounds of health, the reader should not forget that we are not yet quite "out of the woods." No one, for example, can give a satisfactory explanation of the cause, or causes of the *first* sound. It is syncronous with the contraction of the ventricles, with the passage of blood from the ventricles to arteries (pulmonary and aorta), with the tension of the auriculo-ventricular valves, and with the impulse of the heart against the left side. As a consequence, we have had physiologists attributing the first sound, first to one then to another of these elements; and also to all of them combined. The most recent writer on physiology regards the sound in question as due entirely to the auriculo-ventricular valves. The author before us thinks these valves are concerned in its production, but he associates with them another element, the impulse of the heart against the chest

"One of these elements consists of a valvular sound due to the action of the mitral and tricuspid valves. The other element, in the author's opinion, proceeds from the movement of the apex of the heart against the thoracic walls. In a practical point of view, however, it is unimportant whether the latter element be thus explained, or whether it be accounted for on the hypothesis of a sound adequate to its production, due directly to muscular contraction."

Here we have set forth the author's opinion as to what produces the *first* sound, accompanied by a statement that a knowledge of the *cause* of this sound is *unimportant* in a practical point of view. We will not quarrel with the author about his opinions as to what produces the sound, for however erroneous they may be, he has a right to them until the truth is known. But we are not pleased to see him regard the sound as *unimportant.* Was anything ever certainly known of pathology, before a knowledge of physiology? Axiomatic, it seems to be, that a knowledge of physiology should precede all notions on pathology. If our author is yet in the fog on physiology, on what it is that causes the normal sounds of the heart, what does he know of abnormal sounds? "Mitral lesions," he remarks, "impair the mitral portion of the valvular element of the *first* or systolic sound." Suppose now that we adopt the theory of M. Beau, who attributes the first sound to *auricular* contractions, what becomes of the author's statement that mitral lesions modify this sound? *Beau* would have the sound primarily modified only when the auricles are the seat of disease.

When the heart is in a healthy state, all of the blood of the organism passes through it once in every two or three minutes; and so noiseless is this process, from the harmony of valves, cavities, orifices and vessels, that but two sounds are heard, called *first* and *second* sounds. Any others, proceeding from the movements of the heart, either replacing or superadded to these, are abnormal, and designated by the general term "*cardiac murmurs.*" These murmurs, it is surmised, may originate from something in the interior of the heart, *endocardial* murmurs; or from causes confined to the exterior, *exocardial.* Then we have some connected with blood vessels, *vascular* murmurs. Murmurs, again, are described as *organic* when connected with lesions of structure, and *inorganic* when connected with lesions of function.

We give the following from the work as a specimen on diagnosis. In these paragraphs questions are discussed that should receive attention at the hands of all who hold themselves in readiness to care for cardiac diseases:

"*Can the particular seat of valvular lesions be determined, and, if so, in what manner?*—The first part of this inquiry has been already answered. It has been stated that it is practicable, generally, to localize valvular lesions. The mode in which this may be done is

now to be considered. To refer a murmur to a particular valve or orifice, seems to one unacquainted with the subject, to be a refinement in diagnosis not only difficult, but invested with an air of mystery. The rules, however, are extremely simple; their application is by no means intricate, nor does it require the exercise of any extraordinary skill or tact. The points involved in determining the particular seat of lesions, relate, 1st. To their relations to the heart-sounds; 2d. To the different situations in which murmurs are found to be most intense, and the different directions in which they are farthest propagated; 3d. To the pitch and quality of the murmur; and, 4th. To the condition of the heart-sounds considered in connection with the murmurs. In treating of this branch of the subject, it will be most convenient to consider the murmurs as embraced in two classes, viz: *systolic* and *diastolic, i. e.*, accompanying either the first or the second of the heart-sounds. The reader, however, will continue to bear in mind that a systolic murmur may be either an aortic direct, or a mitral regurgitant murmur; and that a diastolic murmur may be either a mitral direct, or an aortic regurgitant murmur. These names, derived from the relations of the murmurs to the different blood-currents which have been described, are extremely useful in fixing these relations in the memory.

"*Localization of Systolic Murmurs.*—In tracing an endocardial murmur to its source, the first point is to ascertain whether it be a systolic or a diastolic murmur. Generally this is unattended with difficulty; but in some instances it is not easy. The difficulty arises from the rapidity of the heart's action. If the heart-sounds recur with great frequency, the systolic and diastolic sounds are not readily distinguishable from each other. The two sounds follow each other so quickly that the difference in duration between the two pauses or intervals is scarcely apparent. Moreover, under these circumstances, the first sound frequently loses its distinctive characters as regards its relative length, quality, and even pitch, and the two sounds become nearly or quite identical. Occasionally the two sounds cannot be discriminated, until the frequency of the ventricular contractions diminishes, or is reduced by certain sedative remedies, such as digitalis, or the veratrum viride. When the two sounds are with difficulty distinguishable from each other, it is, of course, proportionately difficult to determine which of the sounds an existing murmur accompanies. This difficulty, happily, is experienced in only a small proportion of cases. In the few instances in which a

murmur cannot be referred to either sound, the localization of lesions is thereby made with less ease and positiveness. The rules, however, are still measurably available. Whenever the rapid action of the heart does not give rise to difficulty, the different characters as regards length, quality and pitch, which belong to the first or systolic sound, enable the auscultator to distinguish it with readiness. These characters have been already described. If any doubt arise, with the finger upon the pulse of the patient while auscultation is practised, it is easy to determine with which of the two sounds the pulse is synchronous, or nearly so. The sound which occurs synchronously with the pulse is, of course, the systolic sound.

"Assuming that a murmur has been ascertained to be systolic, it may be either a mitral regurgitant or an aortic direct murmur. The question which next arises is, how is it to be traced to the mitral or to the aortic orifice? If it be mitral, its maximum of intensity is at or near the apex of the heart. In some instances it is most intense at the point where the apex-beat is seen, felt, or determined by auscultation. In other instances the intensity is greatest at a little distance to the left of the point of apex-beat. When the latter is the case, the explanation is probably that given by Dr. Sibson, viz: the murmur is somewhat obscured directly over the apex, by the intensity of the first sound, and sometimes by tinnitus. The murmur may be confined within a circumscribed space around the apex. It is generally heard over the body of the heart, within the superficial cardiac region, but with diminished intensity. Above the base of the heart it is often feeble or wanting. It is not propagated into the carotids. If it be transmitted to the upper part of the chest, as is sometimes observed when it is unusually loud, the intensity is much less than over the body and apex, or below the heart. It is often diffused over the left lateral surface of the chest, and may extend to the posterior surface on the left, and sometimes on the right side. When heard on the back, its intensity is greater below than above the spinous ridge of the scapula, the maximum being generally near the lower angle of the scapula. The quality of the murmur may be soft or rough. It is soft in the great majority of cases. Roughness, however, belongs almost exclusively to systolic murmurs. Diastolic murmurs, at least, much more rarely than the systolic, present this quality. It very rarely has a musical intonation in this situation. The pitch varies in different cases, but, as a rule, is neither extremely high nor low. It is rarely as high as the letter R whispered,

and still more rarely as high as S. It is seldom as low as AWE. In the larger number of instances, it is represented by WHO. The mitral valvular element of the first of the heart-sounds is frequently diminished or wanting, leaving the element of impulsion unduly predominant or sølely present. The diminution of this element is in proportion to the injury of the valve which the lesions have occasioned, and its absence shows that the valve is nearly or quite useless. The aortic second sound is diminished in intensity in proportion to the amount of blood which regurgitates through the mitral orifice. The pulmonic second sound is thereby rendered relatively more intense, and its intensity is often positively augmented by obstruction to the pulmonary circulation and hypertrophy of the right ventricle.

"The foregoing points distinguish a mitral regurgitant systolic murmur. If, on the other hand, a systolic murmur be an aortic direct murmur, its maximum of intensity is at or above the base of the heart. Its intensity is less over the body of the heart, within the superficial cardiac region, than at the base, and it may be lost in the latter situation. It is still more feeble and is often lost over the apex; and it is very rarely propagated below this point. The particular situation where it is most intense, is usually in the second or third intercostal spaces nigh to the sternum. In the third intercostal space on the left side nigh to the sternum the intensity is, in general, notably less than at the corresponding point on the right side. From the base of the heart it is propagated upwards for a greater or less distance, more so on the right than on the left side. It is often pretty loud at the sternal notch. It is heard in the neck over the carotids. It is sometimes heard on the posterior surface of the chest, and when this is the case its maximum is in the left interscapular space on a level with the spinous ridge of the scapula. It is soon lost below this point. The murmur may be soft or rough, the latter quality being much less frequent than the former. It is, however, oftener rough than a systolic mitral regurgitant murmur. The pitch is usually higher than in the majority of the instances of a mitral regurgitant murmur, often being represented by the letter R, whispered. The pitch, however, varies considerably in different cases. It has a musical intonation oftener than a mitral regurgitant murmur. The aortic second sound of the heart is frequently impaired and may be extinguished, the pulmonic second sound remaining. The extent to which this sound is compromised, will, of course,

correspond to the amount of injury to the aortic valves incident to the lesions which give rise to the murmur.

"As already stated, the two systolic murmurs may be associated in the same case. This fact can generally be determined. The murmurs are rarely identical in quality and pitch; and each murmur has its maximum of intensity in different situations, and conforms to the characters which distinguish, on the one hand, a mitral regurgitant, and on the other hand, an aortic direct murmur. As a rule, the two murmurs in the same case may be localized with as much precision, as when either is present without the other in different cases.

"*Localization of Diastolic Murmurs.*—A murmur having been ascertained to be diastolic, *i. e.*, sustaining a closer relation to the second than to the first sound of the heart, the question to be then settled is, whether it be a mitral direct murmur or an aortic regurgitant murmur. The points involved in this discrimination are less strongly marked than in the case of the systolic murmurs. But in most instances the distinction can be made with proper knowledge and care.

"A mitral direct murmur, as before stated, is strictly speaking pre-systolic. It occurs just before the first or systolic sound, and may be continued into that sound. This is due to the fact that the contraction of the left auricle precedes, by a very short interval, the contraction of the left ventricle, the latter appearing to be a continuation of the former. This is apparent on examining the movements of the heart exposed to view in vivisections practised on animals of large size, and in cases of ectopia. The murmur is usually accompanied by a systolic mitral regurgitant murmur, the same lesions giving rise to both. Its maximum of intensity is over the body or apex of the heart. It is rarely diffused in any direction without the præcordia. It is feeble or not distinguishable at the base of the heart. The murmur is rarely intense, and in the vast majority of cases its quality is soft. The pitch is usually low. It may be represented by the whispered word AWE. The mitral valvular element of the first sound may be more or less impaired, but the aortic second sound (assuming that aortic lesions do not co-exist) preserves its normal intensity. The latter is an important point in discriminating this murmur from an aortic regurgitant murmur. The pulmonic second sound is not only relatively more intense than the aortic in consequence of the diminished intensity of the latter, but is

positively intensified, mitral contraction generally existing when this murmur is present, and, as a consequence, pulmonary congestion and hypertrophy of the right ventricle.

"If the diastolic murmur be an aortic regurgitant murmur, it either replaces or follows more closely upon the second sound than a direct mitral murmur. It is due to the same force which causes the aortic second sound, viz., the recoil of the elastic coat of the aorta, while the mitral direct murmur is produced by the contraction of the left auricle. The former occurs prior to the latter, and hence the corresponding murmur takes precedence in point of time. The intensity of this murmur is not, as is stated by some writers, greatest at the base of the heart, but below, over the body of the organ, nigh to the left margin of the sternum. It is, however, more likely to be heard at the base, in the second intercostal space on the right side of the sternum, than a mitral direct murmur, and this is an important point of distinction. It is generally feeble and very rarely rough in quality. The pitch is usually low. In most instances it is associated with a systolic aortic direct murmur, the same lesions giving rise to both murmurs. The aortic second sound is usually more or less impaired, and in some instances is extinguished. A notable diminution of the intensity of this sound or its extinction, provided neither mitral contraction nor regurgitation co-exists, is proof positive that the diastolic murmur has its source in aortic regurgitation. On the other hand, the integrity of the aortic sound and a diminished intensity of the mitral valvular element of the first sound, constitute hardly less proof that a diastolic murmur is referable to the mitral orifice. Intensification of the pulmonic second sound occurs as a more remote and less constant result than in connection with the lesions which give rise to a mitral direct murmur.

"The two diastolic murmurs may be associated in the same case, but instances of this combination are vastly less frequent than the union of the systolic murmurs. It is, however, as already stated, very common for one or both of the systolic murmurs to be associated with a diastolic murmur. Examples of three murmurs, two systolic and one diastolic, are not very infrequent. Usually, each may be referred to its source. It is not claimed that the rules of localization which have been briefly pointed out are infallible. Exceptional instances will occur in which the source of a murmur is uncertain. But in the great majority of cases it is determinable without much doubt or difficulty. This statement is based on con-

siderable practical experience, and on the analysis of a large number of recorded cases."

The journals contain, occasionally, a case of *rupture* of the heart. The nature of these cases is at present but imperfectly understood. Such an accident, it might be supposed, ought to imply the previous existence of organic lesions, together with their symptoms. Such, however, is not constantly the case. Rupture of the organ has in many instances been observed without the co-existence of any appreciable disease. Nor do the cases on record favor the idea that rupture is very often attributable to unusual muscular exertion. Of thirty-four cases reported in *American Journal of Medical Sciences*, by Dr. Hallowell, of Philadelphia, the accident took place mostly when the patients were in a state of repose.

The following are the remarks of the author:

"Spontaneous rupture of the heart is a lesion of very rare occurrence. It may fairly be doubted if it has ever occurred as a result purely of the violent muscular activity of the organ. In a physical point of view, a broken heart is a poetical license, exclusive of the cases in which the event is dependent on some prior morbid condition of the cardiac parietes. It is an accident incidental to different local affections. In the great majority of cases, it takes place in consequence of softening from fatty degeneration. It may follow extravasation into the muscular substance, constituting the condition called by the French writers apoplexy of the heart, which has been investigated fully by Cruveilhier; great attenuation of the walls in some cases of dilatation; circumscribed abscess; ulcerative perforation of the endocardium; and softening from inflammation. The seat of rupture, in the vast majority of instances, is the left ventricle, either on the anterior or posterior surface. Statistics differ as to the relative liability of the two surfaces. It has been observed in the auricles as well as in either ventricle. Usually a single opening takes place, varying in size from a very minute aperture to a rent of considerable size; but instances have been reported of rupture simultaneously at several different points. It occurs oftener in the male than in the female, and almost always at an advanced period of life. The co-existence of hypertrophy or of aortic obstruction favors its occurrence. It may be attributable to some unusual muscular exertion acting as an exciting cause, but in a large proportion of the reported cases, the patients were in a state of repose when it took

place. The only instance of rupture which has fallen under my observation occurred in a patient admitted into the Charity Hospital at New Orleans with delirium tremens. I did not see the patient during life. He died suddenly and unexpectedly, no affection of the heart having been suspected. On examination after death, a rent was found at the upper and anterior part of the right ventricle near the pulmonary artery. The inner layer of muscular fibres was torn over a space wider than the external opening, showing the gradual progress of the disruption from within. The heart was enlarged, weighing a fraction over fourteen ounces. The ventricular walls were not increased in thickness. The right ventricle was covered with fat, and the walls presented both the gross and microscopical characters of advanced fatty degeneration. At certain points, fatty matter appeared to have replaced the greater part of the ventricular walls, the muscular tissue being reduced to a thin layer, not more than a line in thickness. The patient was about sixty-five years of age. The previous history of the case was not ascertained.

"Rupture of the heart is almost inevitably fatal, and death generally follows at once. In some instances, however, life has continued for several hours. The aperture in these instances was quite small, or the escape of blood was retarded by the formation of a coagulum at the point of rupture. A repair of the solution of continuity is perhaps not impossible, although infinitely improbable. Dr. Walshe states that one case has been recorded of death from rupture in which a former rupture was discovered, firmly filled by a fibrinous coagulum adherent to the wall of the heart. The mechanism by which the fatal result is produced has given rise to considerable discussion. Blood is poured into the pericardial sac with more or less rapidity according to the extent of the rupture. But this sac will not contain sufficient liquid for death to be referred to the hemorrhage alone. Paralysis of the heart from the mechanical compression of the accumulation of blood within the pericardial sac is doubtless an important agency.

"Time and opportunity are seldom offered for an investigation with reference to diagnosis. If life be prolonged for some hours, the symptoms are those which denote syncope with præcordial distress, and coma may ensue before dissolution. Happily here, as in other instances in which a positive diagnosis is unattainable, it would not, if attainable, affect the treatment. The indications derived from

the symptoms alone are those which would be furnished by the knowledge of the accident which has occurred. Death occurring suddenly, or a few hours after the sudden development of alarming syncope, in a person advanced in years, who had previously presented evidence of cardiac disease, and especially of fatty degeneration, warrants a strong suspicion of rupture.

"Rupture of the valves of the heart, or of the tendinous cords and papillary muscles, falls more appropriately under the head of valvular lesions than in the present connection.

"In addition to the lesions affecting the walls of the heart, which have been considered in this chapter, there are some others, extremely rare and unattended by any distinctive symptoms or signs, and, therefore, of little interest or importance in a practical point of view. Carcinomatous and tuberculous deposits have been known to extend from beneath the endocardial and pericardial membranes more or less into the muscular substance of the organ. Few organs of the body, however, are more exempt from these heteromorphous formations than the heart. So slight is the probability of their existence in a given individual case, that they are scarcely to be taken into account in the investigation of cardiac affections which are evidently anomalous. The presence of these deposits in other parts of the body may constitute a slight ground for suspicion that they have invaded the heart, if the signs and symptoms show that the organ is affected with some indeterminable form of disease. In this category are to be included extravasation of blood, or cardiac apoplexy, to which allusion has been already made, and cysts containing entozoa."

In concluding our notice of this book, we may say that it goes out to the world as an American specimen in the way of book making. Compared with other books of the kind, it will "pass muster." The style in which it is written, although not very objectionable, would not bear very well an encomium. For example, on page 122, we have the following sentence—the italics are ours:

"Of these three divisions, according to the primary effects of the lesions, the *two first* alone possess much immediate pathological importance."

We might give other examples of the improper use of qualifying words. The author, of course, in the next edition, will look into these matters.

After all, the volume before us is a very creditable production.

It will enhance the reputation which the author already possesses. Its merit consists in bringing within a reasonable compass what is known, at the present day, of diseases of the heart.

Introductory Lectures and Addresses on Medical Subjects. Delivered chiefly before the Medical Classes of the University. By Prof. GEO. B. WOOD. Philadelphia: J. B. Lippencott & Co. 1859.

The lectures of Prof. Wood, on retiring from the labors of theory and practice, will be well received by the alumni of the old and renowned institution in which his professional life has been spent.

The Lectures relate to Pharmacy, Materia Medica, Theory and Practice, and Observations Abroad, etc. There are also contained in the volume Biographical Memoirs of Joseph Parrish, M.D., and Saml. Geo. Morton, M.D.

The Lectures are written in a very smooth, agreeable style. Every where, however, ideas or matter is made to bow in humble submission to manner. The euphony of sentences seems to have been consulted rather than the attempt to give the burly, bristly touch, so that the reader would feel himself gagged if he attempted to pass over them. The author, therefore, it may be inferred, is a polished, but not a forcible writer.

His labors have been extensive, and he has committed the usual error of working in too many departments. His first course o Lectures was on chemistry. He afterwards lectured on Pharmacy Materia Medica, and finally on Practical Medicine. He has, on the latter two departments, written systematic treatises. On Materia Medica he made his best mark, and neither the world nor he, would have been the worse off if all his energies had been expended in this field. The idea of a man chopping himself up in order to enlighten on different, and, often, very diverse departments, is simply making poor use of his probation on these mundane shores. There is more in any one of the departments than can be mastered by any one specimen of the *genus homo*, it matters not what his gifts are. How much might not Prof. Wood have improved his Pharmacology had his life been exclusively devoted to it. It is a good work, but

he ought not to have been satisfied without having made it the *best* before the profession at the time it was written.

It is, we suppose, generally known that Prof. Wood has now retired from the chair of Theory and Practice in the University of Pennsylvania. In his retirement he takes with him the respect and gratitude of all who have had any connection with him in his official relations. To the graduates of the school he inscribes the volume before us as a memorial of the many agreeable and, he hopes, profitable hours that he has spent with them.

Urinary Deposits. By GOLDING BIRD, M.D., F.R.S. Edited by EDMUND LLOYD BIRKETT, M.D., F.R., C.P., etc., etc. A new American, from the Fifth London edition. Philadelphia: Blanchard & Lea, 1859. pp. 382.

This manual on Urinary Deposits, maintains its popularity, it seems, as well at home as here. It has now reached its *Fifth* edition. The labor of this edition has been assumed, as is seen in the caption, by Dr. Birkett, whose object it has been, to preserve as far as possible the text, on account of the extensive knowledge of the author, his skill in handling his materials, his lucid narrative; and bring the work fully up to the present period. In some instances the new matter is woven into the text; in others it is thrown into notes.

Dr. Birkett records his obligations in preparing the edition before us to Drs. A. Clark, Day, Lehmann, Hassel, Letherby, Johnson, Pavy, and others.

For the commencement of any thing like accurate knowledge on Urinary Pathology, we are indebted to the labors of that sound physicist and accomplished physician, Dr. Prout. Since his time no one has given a greater impulse than Golding Bird. The work before us contains his contributions. It contains, also, the discoveries made since the previous edition was issued.

We have nothing to say of the labors of the late distinguished author. We presume our readers are acquainted with them. If not, they ought to be. What little we have time to notice, will be confined to the additions of new matter.

Among other things we find *two new* acids described as being detected in human urine. These were discovered by Dr. Marcet. The *first* acid "when examined under the microscope appears to

assume the form of oblique rhombohedra, or of prisms derived from that type, aggregating occasionally in stellate groups, but generally branching off from a main crystal or long prism. The crystals transmit readily polarized light, are soluble in ether, alcohol, and boiling water." The *second* is found to solidify in colorless concentric groups of radiating crystals. Generally present in the deposit containing these acids, is a pink sediment regarded by Robin as *urocasine*.

The presence of *lactic* acid in the urine, seems to have been held in doubt by the author of the text. Berzelius in his later days, however, was satisfied of the fact, and so also is Lehmann.

The white deposit, so common in urine after standing a few hours and having generally at first the appearance of minute globules adhering together in linear masses, is not, it seems, urate of *ammonia*. Lehmann, Henritz and Letherby, have determined that it consists of urates of soda, potash, lime, magnesia, and a small quantity of ammonia.

By the text, when *oxalate* of lime is thought to be present from the circumstance of no deposit taking place in the urine after standing a reasonable length of time, we are told to examine the specimen microscopically, when, if present, the characteristic octahedral crystals will be discovered. Other compounds, however, assume the octahedral form, though some of them are so rarely present in urine as scarcely to deserve a notice. The one most likely, from the frequency of its presence, to embarrass the diagnosis, is chloride of sodium. Arsenious acid and protoxide of antimony assume the octahedral form, but of course would rarely be found in urine.

No one during the present, or last century, has imparted more plausibility to explanations of pathology on chemical principles than Leibig. Several of his theories have been adopted by the author of the work before us. Leibig recognized one great cause for the appearance of an excess of uric acid in the urine, founded on his theoretical views of the conversion of this substance into *urea*. He assumed that in the metamorphosis of the tissues, insoluble uric acid is first produced. This is converted, he imagined, into urea under the influence of the oxygen of the blood-discs, "*the oxygen carriers*." Whatever, now in the shape of disease quickens the circulation, according to this theory, increases relatively the amount of urea to uric acid. Hence, in fever, the phlegmasias, phthisis, etc., the relative amount of urea should be decreased, while in diseases charac-

terized by a slow or feeble circulation, the quantity should be diminished.

This hypothesis it seems is not sustained at all by clinical observation. Lehmann writes, "the pretended oxidation of the constituents of the blood which was supposed to explain phthisis, as well as gout and stone, is not the simple method by which alone specific disease or individual, well characterized processes, can be explained with scientific accuracy. For there are no acute, and but few chronic diseases, in which the oxidation of the constituents of the blood is not diminished or impeded. And again, that there is no disease characterized by a too sudden or rapid oxidation of the blood."

The facts in regard to an excess of uric acid in the urine seem to warrant the inference, of a waste of tissue more rapid than the supply of nitrogenized food; or too great an amount of nitrogen in the food, or obstruction of the cutaneous outlet for nitrogenized excreta. (Bird.)

It should not be forgotten that the presence of uric acid in the urine has quite a close relation to the functions of the skin. Perhaps the most important constituent of urine is uric acid. Calculous formations are largely composed of it; and there exists but few that do not have their neuclei of this salt. "Of 374 calculi in the museum of Guy's Hospital, at one time, the neuclei of 269 were found to be composed of uric acid or urate of ammonia alone."

The treatment for overcoming the uric acid diathesis is not very well understood. Every thing of course calculated to prevent aggregation, or dissolve a stone in the act of growth, would be indicated. The *fons et orrigo* of the calculous diathesis being in the digestive process, a measure of prime importance would be restoring tone to the organs of digestion. Second only in importance to this, if we would judge by a few experiments, would be the exclusion from the food of nitrogenized articles.

Remedies which act as solvents of *uric* acid take a secondary position in the treatment. Soda, potass, and their carbonates, exert a favorable influence, as has been long known, in dissolving calculi, and it may be that their action extends to the neutralizing of uric acid so as to prevent precipitation.

On the authority of Dr. Letheby, the waters of Vichy are spoken of in the work before us as having a well merited reputation in cases of uric acid gravel. This water has been prepared artificially at the

German Spa. at Brighton, and may be procured in pint bottles. It is said that these waters owe their efficacy to the presence of carbonate of soda.

For the present, we must here close our notice of this book. From what has been said, the reader will notice progress in the whole department of urinary pathology. The chemistry of urine is still, it seems, not understood. The white amorphous sediment so commonly described as *urate* of *ammonia*, has very little of this salt in its composition—while the theories of Leibig for the explanation of physiological and pathological processes are one after another being invalidated by observation and clinical experiment. In our review we have just reached the 187th page on which commences the chapter on the clinical *pathology of oxalate and oxalurate of lime*. This is *the* chapter of the volume, the author contributing more original matter to it than to any other. This chapter, we may remark, will constitute the subject of a future notice. In the mean time we may remark that many of its points have been attacked by men of distinguished ability, among whom we may mention Lehmann, Scherer, Bence, Jones, and Rees. The *import* of what Bird denominates *oxaluria*, or the "*oxalate of lime diathesis*," is to our mind very successfully questioned.

What now of more importance than a knowledge of the urine? By general consent it represents the surplus water of the organism, a large portion of imperfectly assimilated elements of food, and those elements of the disorganization of tissues which can not perform any ulterior process in the economy nor be got rid of by the skin or lungs. A failure of the urine to represent the normal proportions of either the fluids or solids, implies the existence of disease; and the disease may be seated in the kidneys, or in some other organ. The fashion now is to look to the kidneys, for but few of such diseases. Faults in the lungs, skin, and liver; and still more remotely, faults in *primary* and *destructive* assimilation, are regarded as lying mostly at the foundation of urinary troubles.

Urea, uric acid, and no doubt most, if not all, of the solid matters found in the urine, are the result of metamorphosis of the tissues, destructive assimilation. Being no longer of any service in the economy, they are liquified, and in this state enter the circulation. They exist as a consequence in the blood, and the office of the kidneys is simply confined to the process of elimination. The functions of the kidneys being improved, urea and uric acid escape

in small quantities from the blood by the skin. It has also been found, in cases of disease of the kindneys, in copious quantities in the evacuations of the bowels.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

The Seceding Medical Students.

In our last issue we referred to the secession, during the present winter, of southern students from the medical colleges of Philadelphia and New York. The number, from the information before us at the time, was set down at *three* hundred. This we soon saw was contradicted, the number being made much less. We *now* see, however, by southern journals, and by a statement made by Dr. McGuire, who took part in the affair, that we were right.

Northern journals, in commenting on this matter, are uniform in the expression of their regrets; and, without being invidious, we may say that we admire the temperate careful tone of the North American Medico-Chirurgical Review, in regard to the incident. It was just what might have, *a priori*, been expected from Prof. Gross. Who, indeed, in the north, could fail to be humiliated in contemplating the existence here of a public sentiment that could give any coloring of propriety to the act of these seceding students? Some of our journals, however, are astonished that politics should be adequate to disturb the harmony of our profession, or endanger, in any way, the progress of its useful and benevolent purposes. They need not be, nor would they be, if the emergencies before us were considered in the light simply of history. We have been told of the medical profession pursuing the "even tenor of its way," irrespective of all extraneous influences. Such talk is simply nonsensical. If our nation was involved in a serious foreign war, there would be, to say the least, an interruption, to a greater or less extent, of every scientific pursuit. Rome was without a medical profession for five hundred years, and who can disconnect this circumstance with her

foreign wars, and the military spirit that overshadowed everything in the empire? Greece engaged in a war with Rome, and thereby lost her arts, her science, her medical profession, and indeed every thing else that could give character to a nation. *Civil* wars, however, are infinitely more to be dreaded. What pursuit or interest could prosper, when brethren are arrayed in mortal strife against each other, when fraternal ties are ignored, and all the restraints removed from the worst passions of human nature? What! a civilization broken to pieces and strewed in fragments over the planet, and still one of the elements of which that civilization is composed "pursue the even tenor of its way?" The supposition is preposterous. If our national organization is to be blotted out, if the ship of State has to be sunk before she has made her first centennial trip, all hope of anything being cultivated on this continent, worthy the attention of enlightened people, is at an end. In the event of such a catastrophe, who can say that we would not forget our letters, our figures, our arts, and return again to our old habit of wearing bear-skins? We will not, however, further speculate on the consequences of the event to which we have alluded.

The people of our country are divided in sentiment on the subject of African slavery. Interpreted by what it says and does, it seems to be the intention of a formidable party in the north to cut African slavery up by the roots—abolish it from the Continent. Interpreted by what they say and do, it seems to be the intention of the people of the south to resist this measure. These opposing forces are destined, if judged of by their elements, to come into conflict; and this calamity, in any way contemplated, is thought to be reducible, at last, to the mere matter of time.

In anticipation of such an emergency, what are the duties of the Medical Profession? Shall our journalists at the South follow the example of our cotemporary of the Nashville (Tenn.) Journal of Medicine, who says that the logic that obtains on the subject of slavery with the Abolitionists, is affected with a cancerous ulcer of many years standing; that we have around us a "pestilential atmosphere that has diffused itself and bred maggots," etc., etc.; or shall we follow the example of the journals generally at the North—"Stand still and see the salvation of the Lord?"

Physicians are, as a general rule, physicists. Now this question involving the capacity of races, that the politicians have been concern-

ing themselves with, and about which there are such discrepant views, North and South, is one, the A, B, C's of which never can be understood by any one except the naturalist. The individual that makes out the difference between birds, fishes, reptiles, mammals; and points out from physical characters the sphere each was designed to move in, would be likely to say something sensible on the alleged differentia of the races and the import, socially and intellectually, of these.

Here, then, it would seem, that the Medical Profession might do something in furnishing the data upon which the politicians, both North and South, might reason with some expectation of arriving at the truth.

We have no speculations, as to how our Philadelphia schools will be affected in the future by the "secession." It constitutes no part of our desire to see the number that annually migrate to that medically renowned city, in quest of information, abridged The teachers there deserve to lecture to large classes. Time, however, if we are not disturbed, will increase the growth in the different States of our Confederacy of institutions adequate in all respects to take care of the whole subject of medical education. In the opinion of many, there is no sense, at the present, in leaving many of our Western and Southern States in expectation of superior advantages anywhere else.

But what we are most concerned about, is the danger threatened to the whole profession, by the clouds gathering in our political horizon. The momentous question of the hour is not, how this or that school is to be affected by our sectional troubles, but what is to become of the whole profession.

Valedictory Address to the Medical Graduates of Havard University. By H. JACOB BIGELOW, March 2, 1859.

We have received a copy of this address, as we suppose, from its author, but have not had time, heretofore, to notice it.

We agree fully with the author in many of his views; and although his style is verbose, and at times muddy, he nevertheless gets out ideas that are worthy of attention. The fallacy of suppos-

ing that severe habits of industry and scientific research necessarily insure a large and lucrative practice, is well exposed. While no student should think of success in business without fine qualifications, he at the same time should not be inattentive, as scientific men frequently are, to the cultivation of the arts that make life agreeable.

The author takes occasion to ventilate his opinions in this lecture on the Power of Remedies. We have seen some of these opinions before, but we had not, up to the present time, seen their propriety or their use.

New England is famous for good common sense physicians; but it cannot be denied that some of the profession in that region share largely of the speculative tendencies of the population. Homeopathy, as far as we are enabled to judge of the people of New England, by the specimens of that race in Ohio, has taken deep root in the minds of the people. They seem to have just capacity enough to see that there are defects in regular medicine, just like in everything else, but not enough to see that there are fewer here than in any other system. By, therefore, the "fallacy of objections," they are driven away from science, and, with all their vaunted cultivation, they become the dupes of all the humbugs proposed to them; and the most transparent of these, Homeopathy, they like the best. The lecture before us is calculated to be of but little service in remedying this trouble in New England.

Death of Dr. Todd.—We notice, by last news from Europe, the death of *R. B. Todd*, Professor of Physiology in King's College, London. Dr. Todd is well known in this country as one of the ablest Physiologists of the day. *The Physiological Anatomy and Physiology of Man*, a work of some 900 pages is a product of the joint labor of Drs. Todd and Bowman. This work, on every page, shows talent and depth of research. Dr. Todd is also the author of a volume of 270 pages, *Clinical Lectures on Diseases of the Urinary Organs and on Dropsies.*

These works have both been republished in this country. Dr. Todd died Jan. 30, 1860, of *Hamatemesis*, aged 51.

New Journals.—The past year has been prolific in the way of *new* Medical Journals. In our last issue, we noticed the *Kansas City Medical and Surgical Review.* The *Chicago Medical Examiner* has been on our table for some months. Its first number is dated January, 1860. It is edited by Drs. N. S. Davis and E. A. Steele.

We *hear*, also, by our exchanges, of the *Louisville Medical Journal*, edited by Dr. T. W. Colescott.

We have also before us the *St. Joseph Medical Journal*, Missouri, edited by a committee consisting of Wm. J. Heddens, M.D., J. A. Chambers, M.D., and J. B. Scearce, M.D.

Also, the *Medical Journal of North Carolina*, edited by Ed. Warren, M.D.

Also, the *New Orleans Medical News and Hospital Gazette*, edited by D. W. Brickell, M.D., and E. D. Fenner, M.D. The three last have been in existence for some time, and were sent to us, as we suppose, for "*exchange.*"

While upon the subject of journals, we may state that the *Virginia Medical Journal* has taken the State of Maryland under its *wing*, and is now styled the *Virginia and Maryland Medical and Surgical Journal.*

The *Boston Medical and Surgical Journal* has changed editors, Drs. Morland and Minot, who have conducted the work for the last five years, retire, and Drs. F. E. Oliver and Calvin Ellis, assume the editorial control.

Journalism in medicine works sometimes very queerly. As regards *age*, a few only in the country have reached their three score and ten. Many in existence when we commenced our editorial career, which is but a day or two since, have gone to their long homes. If such were allowed to speak again, and were interrogated on the causes of their departure, they would, no doubt, with singular unanimity, exclaim, "rations withheld," "muzzled oxen," etc., etc.

Such being the testimony of the past, is it not a little strange that new enterprises in such numbers are every day being commenced. The circumstance, however, speaks well for the implied hopefulness of journalists that the *genus homo* will be better in the future than it has been in the past. Fain would we join, if it would do any good, in giving tone to the innocent passion.

We wonder if our *delinquent subscribers* will understand what we have been driving at in the above prose?

Since writing the above, we have received the *San Francisco*

Medical Press, edited by E. S. Cooper, A.M., M D., Professor of Anatomy and Surgery in the Medical Department of the University of the Pacific. The number before us (No. 1) contains some very clever original articles. The editorial department is also creditable. We welcome with all our heart this visitor from the Pacific Coast. It hails from a region where there are many things that yet need investigation; and a leading one of its objects, as we see, is to stimulate this.

PRIZES FOR MERITORIOUS ESSAYS OFFERED BY THE OHIO STATE MEDICAL SOCIETY.—It will be remembered by those who were present at the last meeting of the Ohio State Medical Society, that a committee was appointed to report a plan for the annual and regular distribution of prizes for meritorious essays. A difficulty which that committee and the Society will encounter, relates to the attendant expenditure of money.

A plan, which we embrace this method of suggesting, is to dispense with the publication, in a special volume, of the proceedings. We are prepared for the cold reception that probably awaits this suggestion. A little reflection changes very essentially the aspect of the matter.

A gentleman prepares a paper with much labor, and perhaps with no little expense, which is duly published. Perhaps six hundred copies are ordered, of which from three to five copies are distributed to each paying member. It is thus distributed accordingly to less than two hundred readers, one-fourth of whom have already heard the paper read. As published by the Society, the proof-reading has almost habitually been such as to do serious injustice to the writer.

On the other hand, we have *five* Medical Journals in the State. Two of these publish near a thousand copies each, and represent private interests that must suffer seriously from any neglect in regard to publication. Two others are supposed to have circulations at least several times that of the number of persons entitled to the Society's proceedings. Accordingly, a gentleman submitting a paper to the publishing committee, authorized to negotiate for the publication of it in any one of these Journals, has greater security as to manner of publication, and has it published several times as

extensively as he could have by the Society, all without expense. This need not debar the Society from arranging for extra copies, or the separate publication of a given meritorious essay, though as a general thing that practice is invidious, and should be avoided.

One object had in view by the Society, and a duty devolved upon the committee, is to have the successive volumes of uniform size. In this it has failed. Any gentleman who has a complete set of the proceedings, by comparing them, will perceive that they are as diverse as the phases of the moon.

We have no doubt but a plan can be devised, accordingly, by which the publication will be greatly improved and extended, and the Medical Journals of the State at the same time encouraged and aided, and the Society saved from $100 to $150 dollars annually, as a fund from which to offer prizes for meritorious essays.

H.

School of Clinical Medicine in New York.—We learn from the Peninsular and Independent for January, that at the late annual dinner of the New York society for the relief of widows and orphans of medical men, a prominent topic was the subject of medical education, and the establishment, in the city of New York, of a School of Clinical Medicine.

We are gratified to note the agitation of this subject, and hope that the end of the matter is not yet.

There is no doubt whatever of the abundant resources of that city for clinical purposes. It seems to us equally obvious that those resources are very imperfectly appreciated, and by no means fully developed.

The conduct of its hospitals, dispensaries, &c., is such that few medical students visit the city on account of them, except in the winter time, when everything else is subordinate to the matter of attending lectures, and when six lectures a day, with dissections and anatomical demonstrations at night, require every moment of time. To suppose that, in these circumstances, medical students—a large part of whom are in the first and second years of their studies—can visit the numerous hospitals, dispensaries, private clinics, &c., that go to make up the clinical resources of the city, is simply ridiculous. In fact, from observation made on the ground, we are convinced

that only an exceedingly small proportion of the classes of the institutions of that city pretend to visit, even the leading hospitals, with that regularity and system which are requisite to clinical studies. Many go to the city prominently on account of the hospitals; but very few, however, find the time to visit them.

We have, for many years, accordingly, regarded it as perfectly futile to calculate that students will quit the best institutions of the country, even, in ordinary circumstances, with the requisite familiarity with the varying phases of disease. Their knowledge is essentially elementary, and too frequently they are only imperfectly or partially interested in the study of disease, at the bed side. Hence, to the fullest extent, we are prepared to assent to the suggestion, that a want of the profession, and equally a want of the city of New York, the great emporium of the western continent, is a thorough organization of the profession, for the purpose of giving systematic courses of clinical instruction. Let such an organization include a liberal number of men of the requisite learning and talents, and occupy five or six months of the interval of the lecture seasons, and sooner or later it will tell largely in favor of the institutions of New York, and accomplish a most beneficent work for the profession of medicine, and the cause of humanity. H.

Dr. Ignatius Langer and the Scott County (Iowa) Medical Society.—This gentleman, a Hungarian by birth, made his debut as a "national man" at the last meeting of the American Medical Association; presenting to that body a little paper on the "Subcutaneous injection of Medicines generally, and of Sulphas Quiniae especially." The Association generously made him chairman of a committee to continue the investigation of the subject, and report to the next meeting; thus giving the gentleman grounds for the very reasonable and laudable expectation of another national ventilation.

Within the last few months, however, a number of our exchanges, laudably sensational in their proclivities, published certain proceedings of the Scott County (Iowa) Medical Society, expelling the said Dr. Ignatius Langer from its communion and fellowship. These proceedings were forwarded officially by the Society, through its officers, evidently with a view to advertise Dr. Langer, on a scale commen-

surate with his position as a "national man." In this way it was done extensively and thoroughly, thus giving that gentleman a second national airing.

The main point made against Dr. Langer by his confreres, was that he had "made and repeated from day to day certain unwarranted examinations of a pregnant female, previous to the time of labor, with the pretended object of discovering and correcting certain malpositions of the fetus in utero, and of publicly proclaiming the object and intention of his repeated visits to said patient," etc., etc.

It appears that this charge, so far as its main features are concerned, was sustained; and Dr. Ignatius had only enjoyed his national honors for a few weeks, when he found himself suspended by his local society; thus depriving him of his prospective national honors, seriously marring the recollection of the glories of the past, and giving another sad illustration of the painful fact that, after all, there is but a single step, whether towards front or rear, between the sublime and ridiculous.

But, evidently recognizing the magnitude of the interests at stake, Dr. Ignatius writes a lengthy reply to a construction of the charges, to the effect that the Scott County Society had virtually expelled him for resorting to external manipulation for the purpose of effecting the cephalic version. In this reply he gives a copious citation of authorities, to sustain his views and practice; making a lengthy article of seven or eight compact printed pages.

As the attack upon him had been extensively published, he now makes a demand upon editors, in conformity with well settled usage, to allow the medium through which the attack was made to be used for reply. In this way a large number of our exchanges have placed themselves in positions in which they will be supplied with sensation for some time to come. Some have already yielded to their honorable impulses, and are engaged in grinding out large grists of national honors, for "injured innocence."

It is very evident that several serious blunders have been committed in connection with this affair. The first of these was committed by the Scott County Medical Society. We presume that, in the main, its action is right. At all events it is generally safe to respect the action of the regular and accredited organizations of the profession. So far, then, as the charges against Dr. Langer are concerned, and the action of the society, first in his suspension, and

finally in his expulsion, not having the case with its varied incidents before us, and consequently having no knowledge to the contrary, we are disposed to respect its action. But at that point it had done its whole duty; and when it lost sight of this fact, and proceeded to advertise the disgrace it had inflicted upon an unworthy member, it transcended its official prerogatives, and gave occasion for the suspicion, that, after all, the whole affair may possibly have originated in wrong feelings, and unworthy motives. Nor are these suspicions relieved by the occasional allusions, variously made, to Dr. Langer's connection with the American Medical Association.

Another blunder was made by our editorial brethren, in a too ready compliance with the wishes of the society, in giving publicity to its action. These charges were spread out into a couple of printed pages, and were exceedingly rank. We are gratified to believe that our editorial brethren are not so dull as to perceive, in the circumstances, the possibility of mistaken or wrong action on the part of the society; or, that their honorable feelings would not allow such an attack, without admitting a defence. Hence, if Dr. Langer is a gentleman, an injured innocent, as our friends of the New York Press already seem to have concluded, great and irreparable injustice is done him. If he is a knave, the details of the proof belong to a special locality, and the aspect of it presented to Editors is such as to suggest the honorable obligation to allow the reader to hear the defence. Thus, if a knave, even, the opportunity of manufacturing sympathy can scarcely be denied him.

We would very much prefer that the position of the Scott County Society were such that, to the fullest extent, we could sustain it. We are convinced that the profession has much to do in giving tone to its own ranks, by looking after the conduct of its members, and arraigning them when derilect. We are distinctly in favor of holding tight reins, and using the lash on proper occasions, in a suitable manner, and to an appropriate extent. The difficulty in the present case, is that the organized action of the profession loses its moral force, from being overdone. Stopping at the proper point, we have no doubt but the American Medical Association, and all honorable men of the profession, would have been disposed to regard the action had as just, final and satisfactory. By overdoing, suspicions are to some extent aroused, and the opportunity afforded of creating sympathy, which may cause the members of the Scott County So-

ciety some inconvenience; defeat the laudable purposes which it is supposed they had in view, and discourage the exercise of wholesome discipline in other cases. H.

A Young Physician wishing a Situation.—A young gentleman, graduate of Starling Medical College at its last session, wishes to get a situation with an experienced practitioner. If any one of our readers desire such a connection, or know of any one who does, we shall be pleased to be informed of the fact. Address "Ohio Medical and Surgical Journal, Columbus, Ohio."

Summer Session.—Our summer session will commence on the 4th of April and continue three months. It is designed to elaborate certain subjects more fully than can be done in the regular winter course.

Physicians entrusted with the education of young men for the medical profession, will see at once the propriety of the measure before us. All other things being equal, the student who attends summer lectures will be very much in advance of those who do not.

"A Caricature in Hyperbole.—We clip the following from the *Ohio Medical and Surgical Journal*, being a part of an editorial comment upon the recent stampede of the southern students from the Philadelphia schools. We do so for the purpose of entering our humble protest against its censoriousness and disparaging allegations, which will be echoed, no doubt, by every quack journal in the land; and re-echoed by certain trans-Atlantic critics, who will rejoice over it as furnishing evidence of the utter worthlessness of American medical literature, and this on the authority of our confrere at Columbus, Ohio.

"Our protest is because of its lack of truthfulness, and we take occasion to deny its averments, and affirm that there is no truth in the passages which we have taken the liberty to italicize. We do this that our respected contemporary may have the opportunity to correct or explain, or admit that his hyperbolical assault upon the

whole profession was intended as a caricature, and retract it. Should he fail to do so, we hold ourselves ready to prove, by irrefragable evidence, that, in an evil hour, he has drawn upon his imagination for his facts. We have little patience with the *croakers*, who are ever parading their own deficiencies, as characterizing the whole body of the profession. The fault in the picture is, that it is *not true:*

"'As a *Medical* nation, we have scarcely doffed the swaddlings of infancy. Our institutions of learning are *all*, as yet, in the formative state. We are indeed as sappy as we well can be. *We have no authors on any department of science.* The unthankful business of collecting together the labors of others is the *most* that those of us who have aspired to authorship have *shown ourselves capable of.* As yet we have reared no specimen of the *genus homo* with capacity enough to invent a *maxim or a saying worth recollecting, or that has lived over six months. Our ideas are not only all borrowed, but our words too.* If we wish to say anything forcibly or elegantly, we must quote Solomon, Shakspeare, or the Classics.'"—*Amer. Medical Gazette, New York.*

We have time, as we are just going to press, but for a word of reply. What institutions have we that are out of the *formative* stage? Who are our authors that have attempted anything more than compilation? What have we discovered in Materia Medica, Chemistry, Anatomy, Physiology? What operations have been originated in Surgery? What new disease described? What improvements in treatment? It is admitted on all hands that chemistry and the microscope have been altogether the most prolific of modern improvements in medicine. What contributions from American chemists? American microscopists? We have heard of ether, the oxyhydrogen blow-pipe, Horner's muscle, ovariotomy; but do such things amount to anything in comparison? Are our surgical or obstetrical instruments superior to those of the Saracens? Do we treat the phlegmasiæ or fever more successfully or philosophically than did Hippocrates? Do we know anything more of cancer than did Rhazes? Or have our surgeons improved on the rules of this eminent Arabian, with reference to interference?

We will, just now, ask no more questions. If it pleases the Gazette to let us hear from it on these, we will consider the whole matter then open for discussion, and will embrace the occasion, at some future time, to ventillate a little "on what we are, and what we ain't."

In the mean time, we will say to the Gazette, that we have no disposition to disparage the labors of our countrymen. We claim to be among the stockholders of the capital, if there is any on hand. We have written a volume larger than Sydenham's Practice from direct "observation and experiment," and a good deal more from "second-handed observation." Still we see nothing to found a claim to consideration upon. For twenty years we were in the physician's field of labor with the disposition to investigate, and with the facilities for such a work, but during all this time we never discovered a new truth. We often thought we had, but, on research, we found we had been anticipated by some one else.

We may say, before we lay down our pen, that we were surprised when our attention was called to the Gazette's strictures. They are just such as might have been expected from a Sophomore.

When admiration was expressed of Newton's discoveries, he said: "To myself I seem to have been as a child playing on the sea shore, while the immense ocean of truth lay unexplored before me."—*Ed. Ohio Med. and Surg. Journal.*

THE MEDICAL PROFESSION AND ITS CLAIMS.—Prof. James Bryan, of Philadelphia, recently accepted the chair of Anatomy in the New York Medical College. The above is the appropriate title of an address given by him, introductory to the late regular winter course of lectures. Although rather discursive in its character, it is, upon the whole, a most admirable address, evincing liberal erudition, and abundant literary resources, on the part of its accomplished author. H.

"THE RULE OF LIFE."—This address, from the pen of our friend Dr. E. Warren, of Edenton, N. C., is published by the Euzelian Society of Wake Forrest College, It aims to sketch "the difference between *self love* and *selfishness*, and to illustrate the peculiar modifications exerted by each upon individual character and social development." We have not been able to give this address such a careful perusal as is necessary to qualify us to decide as to its success, as far as its leading object is concerned. It abounds, however, in beautiful passages, and noble sentiments. H.

A Melancholy Casualty.—On Tuesday 31st ult., the wife of Dr. A. C. Castle, while giving some directions to a dressmaker, had her clothes burned from the grate. With great presence of mind she threw herself upon the bed, and wrapped herself up in the quilt; but the crinoline gave vent and space for the fire to burn furiously beneath. She was fearfully burned, and after several hours of intense suffering died.

Closure of the Fontanelles.—Physicians are often questioned about the proper time for the closure of the anterior fontanelle, and it may be difficult for some to answer, since the best anatomists are at variance on this point. We therefore think that it may not be unacceptable to give a summary of some recent observations, by Henri Roger, in the *Union Médicale* for November, 1859.

The researches are based upon the fact, that a cephalic souffle is not heard when the opening is closed by bone.

In three hundred children the anterior fontanelle was never found closed before the age of fifteen months, and never opened after the age of three years.

It must be stated, however, that a distinction is to be made between the clinical and anatomical closure—the first being recognizable during life, the second after death.

In the first case, that is the clinical closure, the size of the opening gradually diminishes, while, at the same time, the membrane becomes thicker until it finally feels like bone. When this takes place, the cephalic souffle is no longer perceptible. The only method of determining the absolute closure by bone, is to examine the dead body. Still, we may assume, that when the fontanelles appear to be closed by ossification, they really are so.

The results arrived at in the manner above mentioned, are as follows: The period of ossification is comprised between the ages of fifteen months and three years and a half. At the first age, the complete change is very rare; at the last, is always found. But these are the extremes. The occlusion generally takes place between the second and third year, and its frequency is regularly progressive from the twentieth to the twenty-third month, increases rapidly after

the second year, and still constantly augments until the age of three and a half years.

Two diseases retard this change—rickets and hydrocephalus; the first by its influence upon the ossific process, the second by its mechanical action. The non-closure of the fontanelles at the usual time may be one of the first manifestations of rickets, and warn us of the approach of the disease.—*Boston Med. and Surg. Journal.*

Chinese Medicine.—The Chinese apothecary prepares roots, barks, leaves, fruits, seeds, resins, oils, alkaline earths, metals, crystals, animal bodies and their several parts, especially their secretions and excretions, into infusions, decoctions, powders, pills, extracts, secret preparations, salves, plasters, etc. The mixtures, decoctions of plants, solutions of salts, etc., acquire, by addition of brown sugar, and of mucous and gelatinous substances, a pretty uniform appearance, and a similar taste. The soluble substances are often prepared before the patient, in an enormous quantity of infusion of tea, and he drinks the medicine and the vehicle in the hot state; the powders are sold in small porcelain and stone jugs, and the stoppers being unscrewed, have on their inner surface a little bone spoon, with which the medicine is drawn out: the pills, which are uniform, and very beautifully rolled and often gilded, are packed in air-tight white transparent wax globes, containing one or two doses. The plasters and salves, usually spread upon red cloth, have a variously-colored paper envelope, written over with explanations and praises of the remedy.

The Chinese divide their remedies into two great classes—namely, those which produce fat, and aphrodisiacs. A large paunch is considered a great title to admiration, and the devotion of this extraordinary people to the fair sex is well known.—*Brit. and For. Med, Chirurg. Review.*

The Doctor at the Helm.—The Veteran Lord Dundonald is now, at the age of eighty-five, writing his autobiography. He relates his exploits with a hearty and sea-man like spirit, which gives surprising interest to the narrative. In describing the dashing capture of a Spanish frigate by this little vessel, the *Speedy*, 158 tons—a

feat which will always be remembered amongst the glories of the English navy, and Lord Dundonald thus refers to the gallant conduct of the late Mr. Guthrie. It is an episode in his life well worthy to be recorded:

"Our rigging being cut up and the *Speedy's* sails riddled with shot, I told the men they must either take the frigate or be themselves taken, in which case the Spaniards would give no quarter, whilst a few minutes energetically employed on their part would decide the matter in their own favor. The doctor, Mr. Guthrie—who, I am happy to say, is still living, to peruse this record of his gallantry—volunteered to take the helm. Leaving him, therefore, for the time, both commander and crew of the *Speedy*, the order was given to board, and in a few seconds every man was on the enemy's deck—a feat rendered more easy as the doctor placed the *Speedy* close alongside with admirable skill."—*Lancet.*

Vaccination in Scotland.—At a meeting of the Medico-Chirurgical Society of Edinburgh, on the 18th inst., a paper was read on the subject of small-pox and vaccination, by Dr. Alexanker Wood, and a lengthened discussion ensued, in which Professor Simpson and other leading members of the medical profession in the city took part. All the speakers agreed in expressing unabated confidence in the efficacy of vaccination, if properly and universally performed, in diminishing the frequency of epidemics of smallpox, and in immensely abating their severity and reducing their mortality.—*Med. Times and Gaz.*, Jan. 28, 1860.

Latent Light.—At the last meeting of the British Scientific Association, Sir D. Brewster exhibited a piece of chalcedony, within which a minute landscape could be seen. If kept in total darkness for four hours, this marvelous picture vanished, but reappeared as vivid as ever on ten minutes exposure to the sunlight; proving that not only could a design be mysteriously insinuated into the interior of the mineral, but that light could be stored up therein, and produced at will. It was surmised that this effect had been produced by the action of nitrate of silver.—*Scientific American.*

Arsenical Poisoning by Paper-hangings.—Three children near Tipton, have suffered from the arsenical emanations from a green bedroom paper in a newly-papered house. The symptoms were emaciation, pining, general restlessness, (worse at night,) and twitching of the facial muscles. Dr. Balenden, observing these symptoms, concluded that they were suffering from the effects of gradual poisoning; and, on being removed into another room, the children recovered.—*Lancet*, Feb. 4, 1860.

Chloroform in Obstetrics.—By Wm. Pettigreu.—Western Medical and Surgical Society. (*Medical Times and Gazette.*) As a general rule he deprecated its use in ordinary or natural labor, for the following reasons: 1. That the Accoucher should attend solely and strictly to his own avocation, and that it therefore necessitates the presence of a second practitioner. 2. The folly of incurring any risk of asphyxia or death, although such cases in the lying-in room are rare with chloroform in comparison with those in which surgical operations are performed. 3. That under ordinary circumstances where matters are favorable and progress natural, it tends to depress the system, leaving the entire expulsion of the fœtus to the efforts of the uterus, supplied as it is by organic nerves, while the muscles of animal life which so forcibly assist its action are almost paralyzed. 4. By its administration there is danger both to the mother and child. Cases illustrative to these objections were related; the exception to the general rule being, where the mother was of delicate and nervous temperament, and where chloroform was administered in a very modified form, more to attract the attention of the patient from her fears than to lessen the natural throes of labor. In protracted labor the author had experienced much benefit in its administration, and although the pains for the first ten minutes appeared arrested, they afterwards returned more strongly, with greater regularity, and under its use the rigidity relaxed, the mucus became more freely secreted, the countenance of the patient became less anxious, and the pulse quickened at first, became stronger, and the child was born in a very short time. Cases illustrative of the facts were then related. The author, in his limited experience, bore out the observation of Dr. Simpson, that hemorrhage seldom or never occurred after the use of chloroform.

New Method of Extracting Gunpowder from the Skin.—Instead of extracting the particles of gunpowder from the skin, by means of the point of a needle or bistoury. M. Busch applies to the part, a solution of corrosive sublimate, five grains to the ounce. An eczematous eruption is thus excited, and the dried vesicles then contain the grains of gunpowder.

Literary Mortality.—A late French writer of authority, M. de Tapies, gives the following interesting facts in regard to the chances of an author to secure lasting fame. How many there are in our profession whose reputations as writers are ephemeral, and yet, who can say that they have not accomplished something for the advancement of our science, although their works have not floated down the stream of time?

Out of 1,000 published books, 600 never pay the cost of printing, etc., 200 just pay expenses, 100 return a slight profit, and only 100 show a substantial gain. Of these 1,000 books, 650 are forgotten by the end of the year, and 150 more at the end of three years; only 50 survive seven years' publicity. Of the 50,000 publications put forth in the 17th century, hardly more than 50 have a great reputation, and are re-printed. Of the 80,000 works published in the 18th century, posterity has hardly preserved more than were rescued from oblivion in the 17th century. Men have been writing books these 3,000 years, and there are hardly more than 500 writers throughout the globe who have survived the ravages of time and the forgetfulness of man.—*Phila. Med. Rep.*

Another "Black Doctor."—The following is a part of the public advertisement of a negro doctor who resides in the upper part of this city:

"T. Edwards is naturally a Doctor—having a gift from the Lord. My mother was her mother's seventh daughter, and I am her seventh son; my father was a seventh son, and I am his seventh son; I was born with seven cauls, and I am a seven months' child, and walked in seven months after I was born, and have shed my teeth seven times."—*Phila. Med. Rep.*

The following order for a book has been received in this city, and we consider it worthy of record as a specimen of the literature of the "eclectic:"

"I want to trouble you to send Me a Book on the practis. Sence I have quet using callomel in diseases in My nehberhod and dont Bleed I cure it quicker turpentine is as good as callomel on the kidnies and Bile if they dont take coald on it. I can cure fever nagew chills quicker with the eclectic. My partener introdused them from cincinati which he studied one coarse with cellibrated professors of the sistym. We often use tees which is safe except lobelia which has puked too much in My hands. injections are favorite in paines in the bowels Wind and Worms than callomel and safest.

"We Want a nother Book on the sistym But We have 2 now But they dont always tell What the disease is and the deepest principals of the eclectic for the most paticular cases and no other doctor is nier than sixteen miles across. send it By the Barer who is gone to By goods in the east I want the Best Book on the eclectic for I hav quet the old sistym."—*Phila. Med. Rep.*

In the year 1567, the midwives took the following oath in England: "I will not suffer any other bodie's child to be set, brought or laid before any woman delivered of a child, so far forth as I can know and understand, also I will not use any kind of sorcery or incantation, in time of the travail of any woman."

Foreign Intelligence—*Death from Chloroform.*—We regret to have to announce another fatal accident during the administration of chloroform for the purpose of producing anæsthesia in a surgical operation. The unhappy patient was Dr. Renwick, of Alloa, a member of our own profession, and but twenty-seven years of age. His disease was ingrowing of the great-toe nail, which it was proposed to remedy by evulsion. Dr. Renwick had previously inhaled chloroform without any bad result; hence, perhaps, a false sense of security. The circumstances are thus related:

A little of the chloroform was poured upon a towel, and he held it to his mouth with his own hands. After a while, as it did not

seem to be taking any effect, he asked for some more, which Dr. Duncanson at first declined to give; but after a while, finding that no effect was being produced, some more was applied. Observing that he was endeavoring to hasten its effect by strained inspirations, he was asked to breathe naturally, which he did. As it still, however, seemed to be having no effect, another small quantity, at his own request, was applied to the towel, which, after a time, produced insensibility; and, his pulse having been found full and regular, the operation, which did not occupy more than a minute or two, was successfully performed. He still remained under the influence of the anæsthetic, but his breathing was regular, and all was considered right. Some cold water was then thrown on his face to arouse him; but this not having the desired effect, other measures were resorted to, but with a like unfortunate result; and when, after a few minutes, his breathing became less frequent and more labored, and the appearance of his countenance began to change, and his pulse had become nearly imperceptible, serious alarm was felt. Artificial respiration by the modern method was resorted to, and in this manner breathing was kept up for nearly half an hour; but, melancholy to relate, his spirit had passed away.

We are unwilling to add any observations which can give pain, but it is certainly to be lamented that Snow's inhaler, or some other efficient apparatus was not employed. There is some reason to believe that Dr. Renwick was the subject of cardiac disease. The *North British Mail* mentions that some time ago a gentleman died under the influence of chloroform, at Girvan, while undergoing a similar operation.—*Lancet, Jan.* 7, 1860.

The Physician Astronomer.—At a meeting of the Academy of Sciences in Paris, on December 26th, 1859, M. Leverrier made the following interesting communication: Dr. Lescarbault, a medical man in busy practice at Orgères, in the department of the Eure-et-Loire, is also a zealous astronomer, and a man who supplies, by his ingenuity, the deficiency of the means which he possesses for prosecuting his favorite science. In March last, M. Lescarbault observed the passage over the sun's disk of a planet within the orbit of Mercury; and he communicated the fact to M. Leverrier, who had noticed certain perturbations in the motion of Mercury, that, in his

opinion, could only be explained by the presence of another planet. This was in September last; and thereupon M. Leverrier visited him, together with M. Vallée, and had been enabled to confirm the title of M. Lescarbault to the discovery. The correctness of the results obtained by him was the more remarkable on account of the paucity of his instruments. On arriving at Orgères, M. Leverrier found a regular observatory, with instruments, chiefly contrived by the Doctor himself, whose finances were limited. Not having a chronometer, he had made himself a pendulum, striking seconds, by means of an ivory ball and a bit of string. Notwithstanding the clumsiness of his apparatus, the calculations of M. Lescarbault varied less from those of M. Leverrier, than those of the most eminent astronomers sometimes do from each other. For want of paper, Dr. Lescarbault had generally written down his observations with charcoal on a deal board; which, with the Doctor's calculations written on it, was presented to the Academy by M. Leverrier.

The Emperor of the French has conferred on Dr. L. the honorary distinction of Commander of the Legion of Honour.

Exhaustion after Suckling.—Protracted suckling, especially when the supply of milk is scanty, is often followed by extreme exhaustion and debility; with the presence, occasionally, of various anomalous symptoms. A young woman, aged twenty, the mother of two children, is now convalescent, in St. Bartholomew's Hospital after an attack of this kind associated with diarrhœa. She suckled her youngest child for seven months, although the breasts were actually empty. She gradually became much exhausted; she had fits of shivering, with cold sweats at night. Some six weeks before admission, diarrhœa set in, and remained persistent; it stopped two or three times and recurred, and thus assumed an intermittent character. She was ordered four ounces of wine and suitable nourishment, and an aromatic draught containing eight minims of tincture of opium. This had the effect of completely checking the diarrhœa. She has begun to gain flesh, her strength is returning, and she looks quite a different person. She had dysmenorrhœa on November 1st, but it has for the present disappeared.

We select this from a number of instances to illustrate the folly, on the part of mothers, of persisting to suckle their offspring when their breasts have ceased to secrete milk. Many such persons complain, amongst other aliments, of weakness of sight, and, in some instances, temporary amaurosis.—*Lancet*, Dec. 3, 1859.